CONESTOGA-ROVERS
& ASSOCIATES

14496 Sheldon Road, Suite 200, Plymouth, MI 48170
Telephone: (734) 453-5123 Facsimile: (734) 453-5201
www.CRAworld.com

August 1, 2014 Reference No. 039611

Mr. Ross del Rosario
Remedial Project Manager
US Environmental Protection Agency
Region 5 (SR-6J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Dear Mr. del Rosario:

Re: Soil Gas Probe 117S Investigation and
Response to USEPA Letter of July 1, 2014
Himco Site
Elkhart, Indiana

On behalf of the Himco Site Trust, Conestoga-Rovers & Associates, Inc. (CRA) has prepared this correspondence to present the results of the SGP-117S bar hole investigation and to respond to the United States Environmental Protection Agency (USEPA) letter dated July 1, 2014 regarding elevated soil gas readings (i.e., methane) at the Himco Site (Site) located in Elkhart, Indiana. This correspondence also complies with Section 3.2 of the approved Final Operation and Maintenance Plan (O&M Plan, CRA, 2012), for the Site. Soil gas probe locations are presented of Figure 1.

INVESTIGATION OF SGP-117S

CRA completed the bar hole gas sampling at SGP-117S as proposed in the June 13, 2014 correspondence to the USEPA (Attachment A). The field investigation was started on July 16, 2014 and was completed on July 18, 2014. This action serves multiple purposes:

- Confirmation of the presence of methane in the area in discrete intervals
- Provide insight into the extent of methane, in particular if it exists towards the residence to the south
- Provide information for the potential alignment of an extension of the Passive Vent Trench (PVT)

The following paragraphs present the results of the field investigation.

The bar hole investigation into the elevated concentrations at SGP-117S was conducted using a Geoprobe drill rig. A field modification to the 2-foot testing interval was required to accommodate the equipment that was available to complete the investigation. A 3-foot testing interval had to be used during the investigation. The new test depth intervals were 1-4 feet below ground surface (fbgs), 4-7 fbgs, and 7-10 fbgs. It should be noted that two holes were drilled per grid location, the first to obtain discrete soil gas measurements, the second to determine stratigraphy. The boreholes were advanced into the groundwater table. Figure 2 presents the 10-foot labeled grid that was used to determine where to conduct bar hole testing. Attachment B presents the stratigraphy logs.

The findings from the field investigation revealed that methane concentrations above the action level were encountered at grid intersections AA-6, A-5, A-6, A-7, and B-6. Methane concentrations at these locations ranged from 0.5 to 7.9 percent by volume with the greatest concentration of methane of 7.9 percent at grid intersection AA-6 at the 4 to 7 fbgs interval. These locations are located east and northeast of SGP-117S. Methane was not encountered southwest of SGP-117S in the direction of the residence; results from C-3, C-4, and C-5 (20 feet south of SGP-117S) were all zero percent methane at every interval. Figures 3, 4, and 5 present the discrete sampling interval results (1-4 fbgs, 4-7 fbgs, and 7-10 fbgs), respectively. Figure 6 presents the compiled comprehensive sampling results. Table 2 presents the sampling results in tabular format.

The investigation demonstrated the limit of the methane above the action level is less than 20 feet southwest and a pocket of methane above the action level is to the northeast of SGP-117S. The pressure readings from SGP-117S have historically been zero or near zero indicating a lack of gradient for the potential migration of methane. The soil gas readings at SGP-27S/D, a location closer to the residence, with zero percent methane also supports the lack of methane migration.

RESPONSE TO USEPA LETTER OF JULY 1, 2014

Elevated concentrations of methane above the approved O&M Plan action level of 5 percent by volume were recorded at soil gas probes (SGPs) 100, 106, 107, 109, 110, and 114 during routine O&M monitoring on June 26, 2014. These soil gas readings were sent to the USEPA in an email dated June 27, 2014, and contingency monitoring began in accordance with the approved O&M Plan. CRA will continue to monitor the above SGPs weekly until three consecutive readings are below 5 percent by volume as also prescribed by the approved O&M Plan. Figure 1 presents

the locations of all the SGPs at the Site, and Table 1 presents the methane concentrations at the soil gas probes starting September 21, 2012 to the latest reading completed July 24, 2014.

USEPA responded to the June 27, 2014 data submittal in a letter dated July 1, 2014. The July 1 2014 letter requested that "Bayer take a more aggressive approach in addressing the methane levels". The USACE in its comments to USEPA stated that the PVT needs to be extended along the east as the current PVT alignment is being "flanked".

Our monitoring results indicate that the soil gas reading on June 26, 2014 was an anomaly in the data set that was likely triggered by excessive precipitation coming into contact with naturally occurring organic material. The USACE also stated that a rising water table and saturation of organic waste could be the cause of the higher methane levels that were measured on June 26, 2014.

SGP 100 MONITORING RESULTS

The methane concentration has trended downward since July 3, 2014, and has been zero percent at SGP-100 since July 9, 2014. There have been 3 consecutive weeks of soil gas readings less than the action level; and therefore, consistent with the approved O&M Plan, monitoring at SGP-100 is no longer required and no further action is required.

RE-INSTALLATION ACTIVITIES (SGP-110 AND SGP-114)

CRA notified the USEPA via email on July 9, 2014 of the separation of the soil gas probe SGP-110. CRA continued to take soil gas measurements as a precautionary measure until the soil gas probe was re-drilled. A similar issue was identified at SGP-114 during the monitoring event on July 8, 2014.

Locations SGP-110R and SGP-114R were re-drilled on July 16, 2014 in accordance with Section 5.8 of the 100% Design Report, with a minimum 1-foot screen and maximum 4-foot screened interval. Attachment C presents the stratigraphic logs for these re-drilled probes.

The stratigraphic log for SGP-110R has peat between 8.8 and 10 fbgs. The material was reddish brown with rootlets. The peat material was sent to Haegel & Associates Engineering in Canton, Michigan for Loss On Ignition Testing to determine percent organic content. The laboratory results indicate the material was 89 percent organic and therefore is a source of carbon that is an alternate source of the varying methane readings at this location. Attachment D presents the laboratory analytical results.

A comparison of SGP-116 and SGP-110R stratigraphy logs illustrates a continuity of peat formation in this area. The ground elevation at SGP-116 is 763.24 with a peat elevation of 754.54; the ground elevation at SGP-110R is 762.2 with a peat elevation of 753.4. These two probes are approximately 50 feet apart laterally. Additionally, the stratigraphy logs from the soil gas investigation of SGP-117S include rootlets at 7.5 to 10 fbgs (AA-3, AA-4, A-6, AA-6, A-7, B-6, B-7, and BB-6). The field technician also noted at AA-6 a "sewer-like" odor during drilling activities.

Picture of rootlets at AA-6 (8-10 fbgs)

Coincidentally, the locations containing rootlets were principally to the east-northeast side of SGP-117S, with the exception of AA-3, and had methane readings at depth (i.e., generally higher than the action level) with the exceptions of AA-3, AA-4, and B-7. There appears to be a layer of organic material, approximately 7.5 to 10 fbgs that is contributing to the generation of methane in the vicinity of SGP-117S.

OTHER OBSERVATIONS

Several other gas probes had methane concentrations above the action level on June 26, 2014. These included SGP-106, 107, 109, 114, 115, 116, and 118. SGPs-115, 116, and 118 are located within the waste and consistent with previous discussions with the USEPA, not included in ongoing contingency monitoring. Monitoring results from other locations are as follows:

- SGP-106 – the methane concentration has dropped to below the action level for the past 3 consecutive weeks, therefore, no further action is required in this area. Additionally, SGPs-13 and 14 remain at zero percent methane as confirmation points that there is no methane migration.
- SGP-107 has 2 consecutive weeks of methane readings below the action level; however, this location has historically been above the action level. SGPs-13, 14, and 15 have been used as sentry points in this area and remain at zero percent methane. In any case SGP-107 is within the PVT system and CRA recommends no further action with respect to this location.
- SGP-109 has a methane concentration above the action level; however, it is within the PVT which is functioning as intended. SGP-16 south of SGP-109 remains at zero percent methane, therefore CRA recommends no further action at this location.
- SGP-114 has historically had elevated methane readings above the action level; however, it is within the PVT and SGP-119S/D remain at zero percent methane. CRA recommends no further action at this location.

CONCLUSION

CRA acknowledges that elevated methane concentrations above the action level (5 percent by volume) represent a potential impact to human health. The field investigation of SGP-117S, the re-drilling of SGP-110, and the stratigraphy of SGP-116 lead to the conclusion that an existing peat layer with significant organic matter content is contributing to the presence of methane in the soil gas. The field investigation determined that the methane does not migrate more than 20 feet south towards the residence and the SGP-27S/D remain at zero percent methane.

Temporary, transient conditions related to unusual weather patterns caused a short term increase in methane levels that have returned to normal in a relatively short period of time without reaching any of sensitive off-site receptors.

Therefore, based on the findings from the remedial field investigative actions as well as other information presented, the Site is to return to ongoing quarterly monitoring with the enactment of the contingency measures in the approved O&M Plan on an as needed basis.

Please contact Douglas Gatrell at (734) 357-5511 if you have questions or require additional information.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

Douglas M. Gatrell, P.E.

DMG/ds/54
Encls: Figures 1, 2, 3, 4, 5 and 6
Tables 1 and 2
Attachment A - USEPA Correspondence (June 13, 2014)
Attachment B - Stratigraphy Logs - Bar Hole Grid
Attachment C - Stratigraphy Logs - SGP-110R & SGP-114R
Attachment D - Laboratory Results - Organic Matter Content

cc: Gary Toczylowski/Tom Lenz – Bayer HealthCare
Christopher Fassero – US COE
Doug Petroff – IDEM
Alan Van Norman – CRA

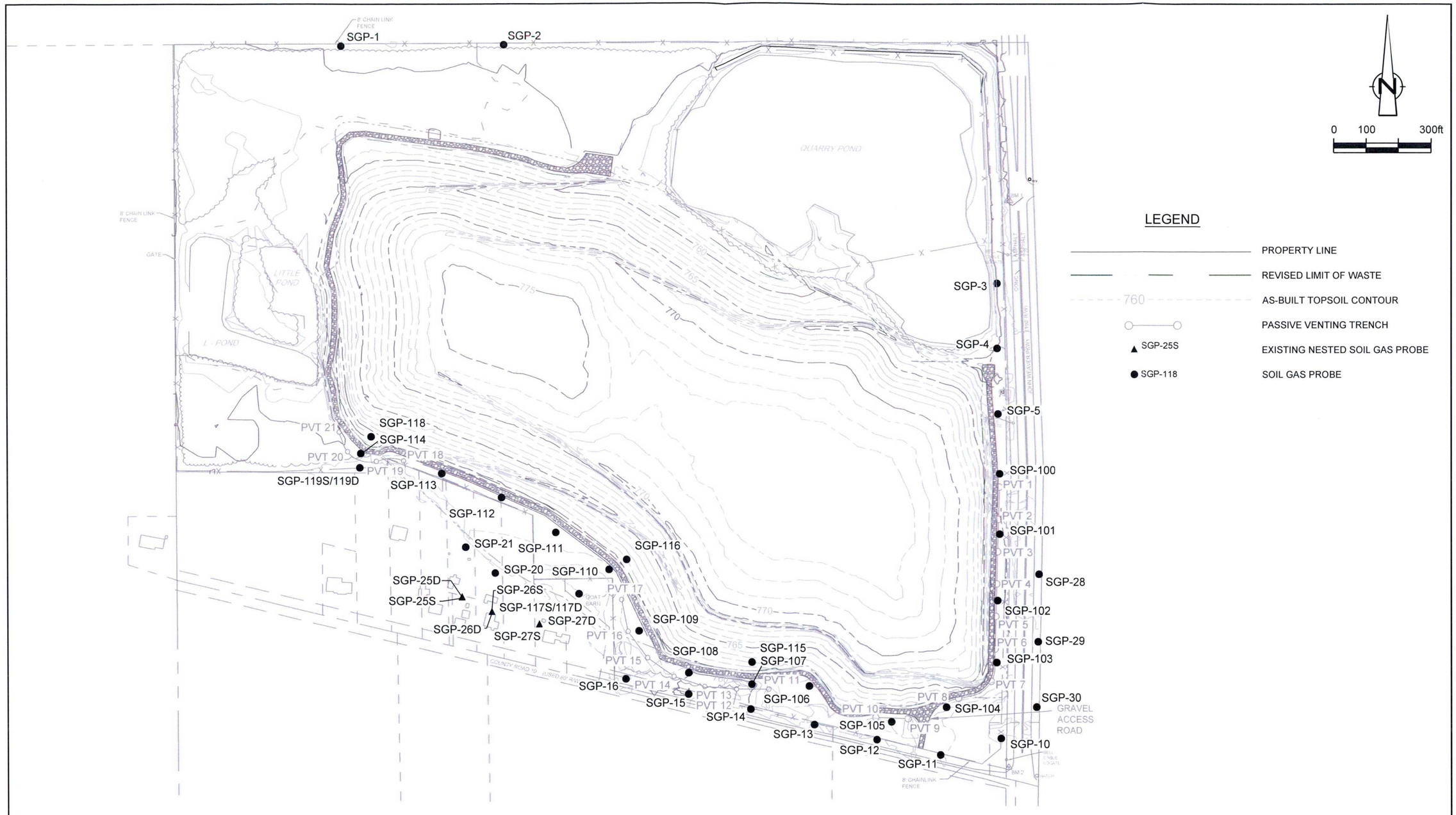

figure 1

SOIL GAS PROBE LOCATIONS
HIMCO SITE
Elkhart, Indiana

039611-00(ROSA054)GN-DE001 JUL 14/2014

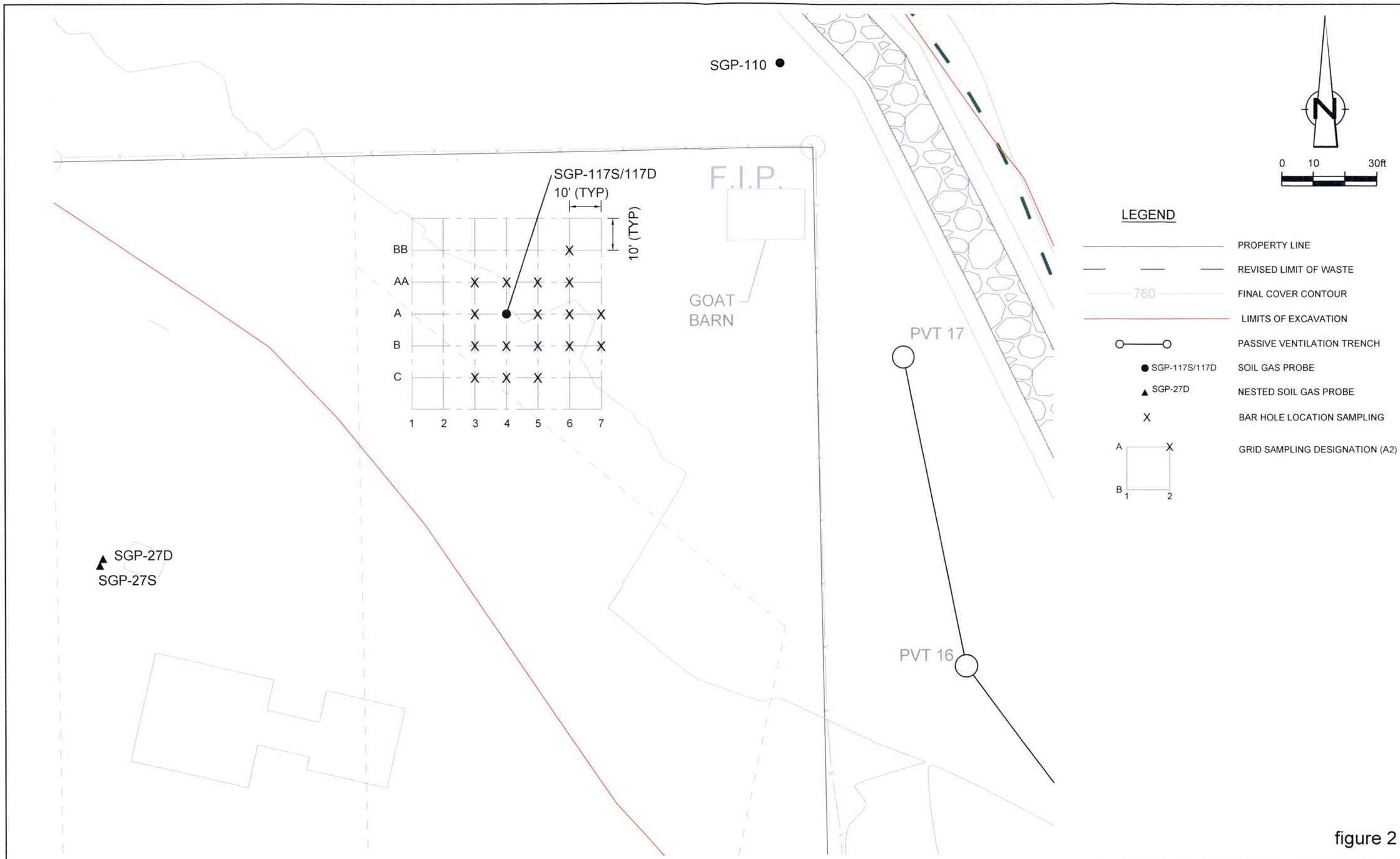

figure 2

BAR HOLE GRID AND LOCATIONS
HIMCO SITE
Elkhart, Indiana

039611-40(ROSA053)GN-DE008 JUL 31/2014

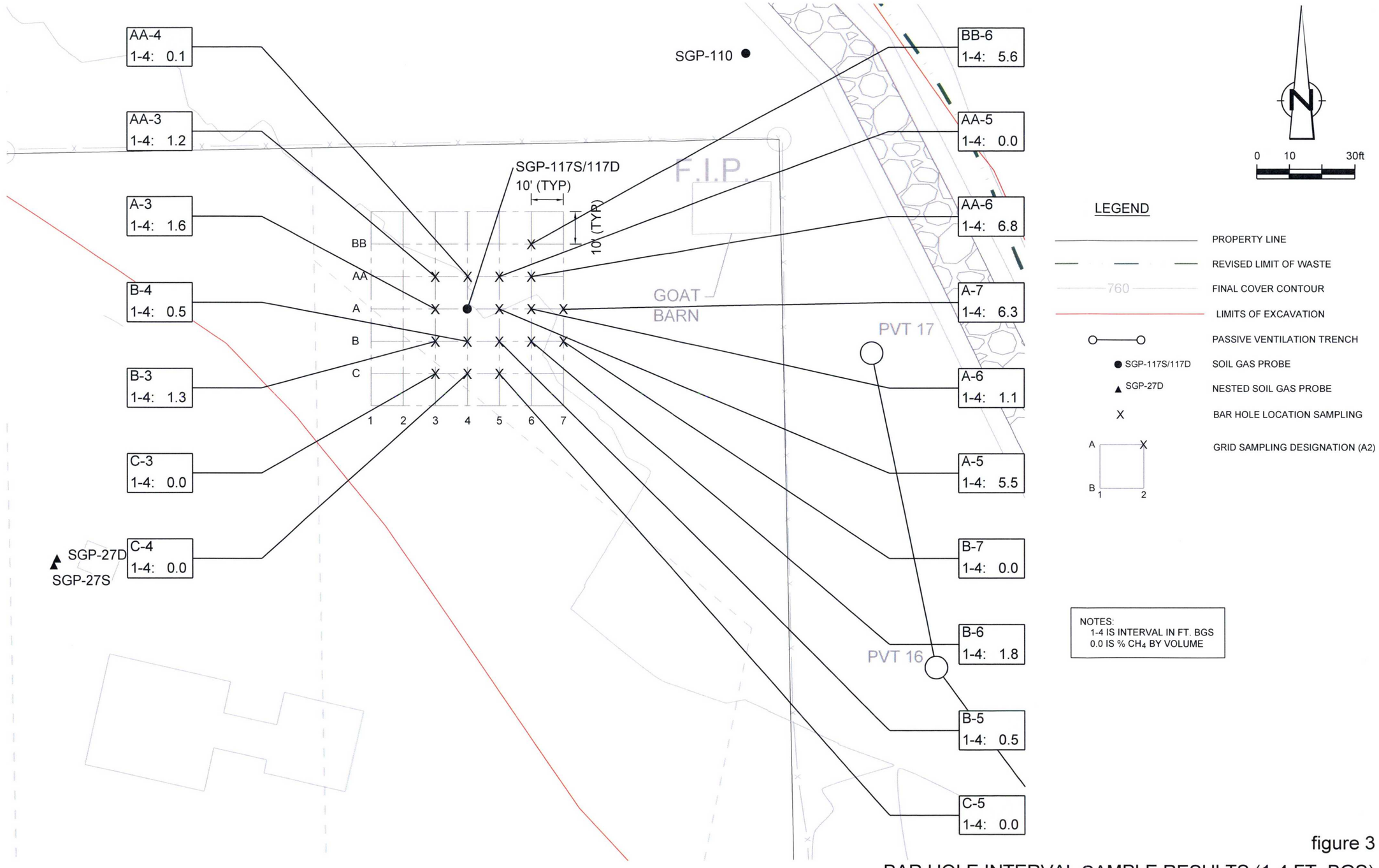

figure 3

BAR HOLE INTERVAL SAMPLE RESULTS (1-4 FT. BGS)
HIMCO SITE
Elkhart, Indiana

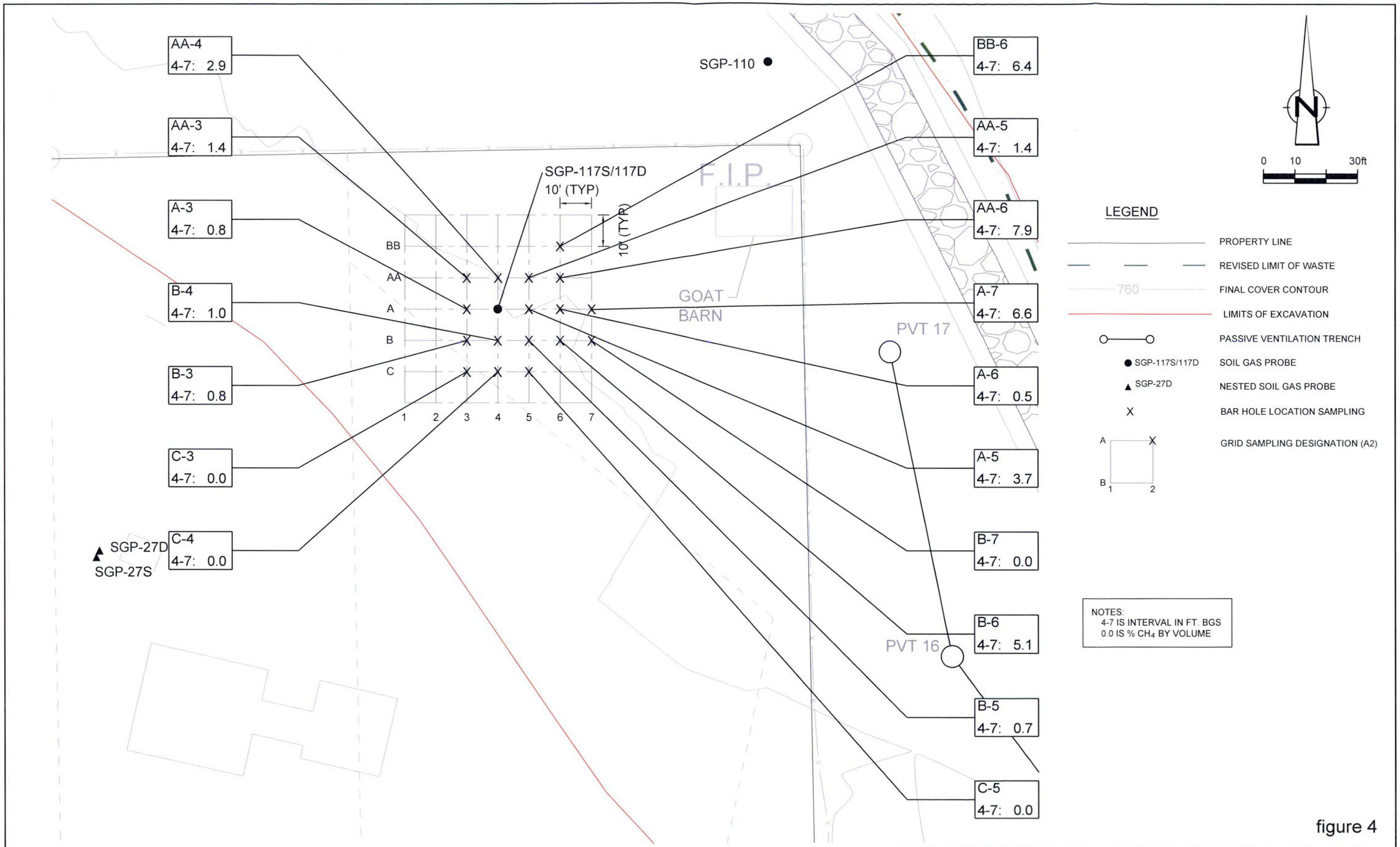

figure 4

BAR HOLE INTERVAL SAMPLE RESULTS (4-7 FT. BGS)
HIMCO SITE
Elkhart, Indiana

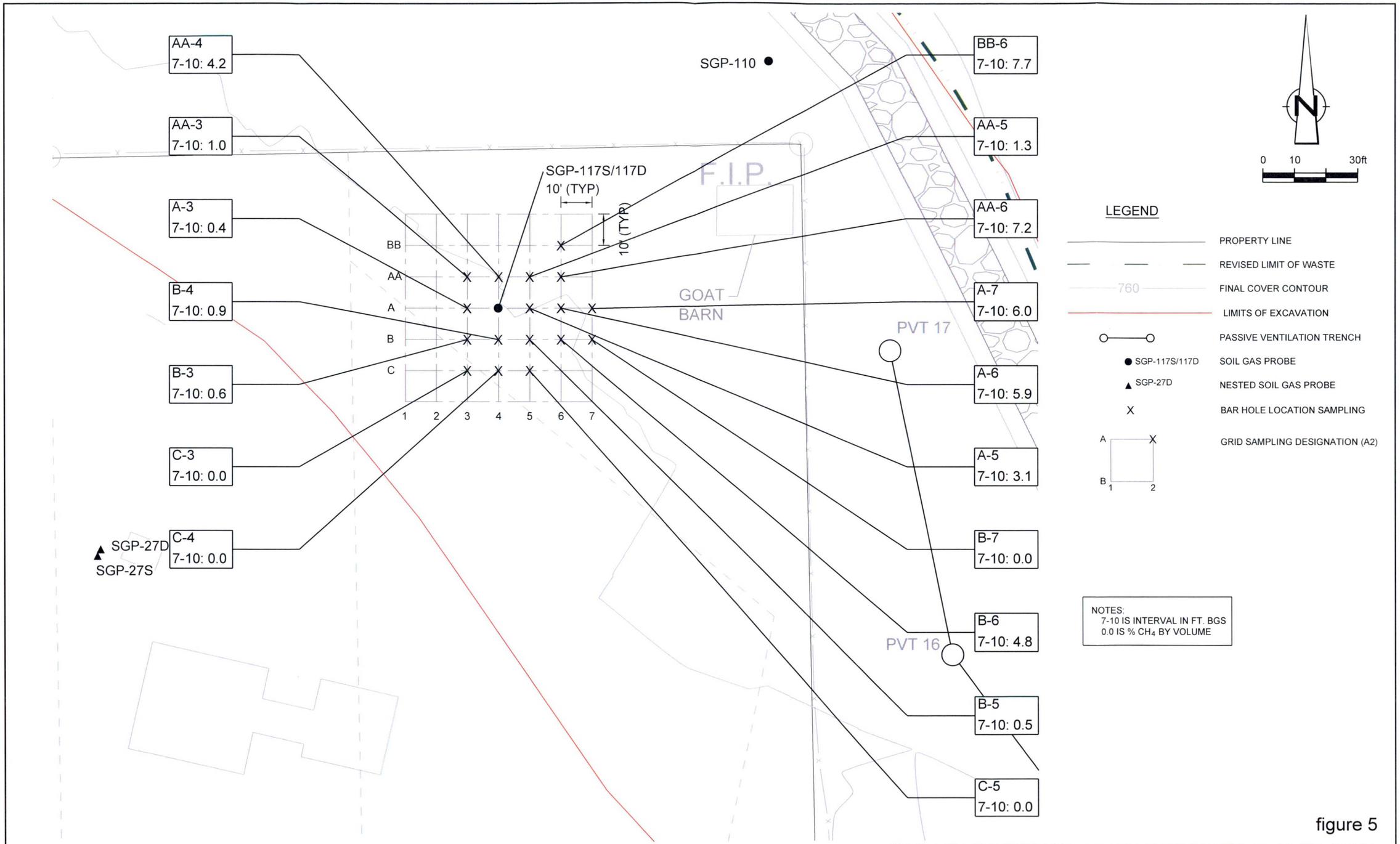

figure 5

BAR HOLE INTERVAL SAMPLE RESULTS (7-10 FT. BGS)
HIMCO SITE
Elkhart, Indiana

039611-40(ROSA053)GN-DE006 JUL 31/2014

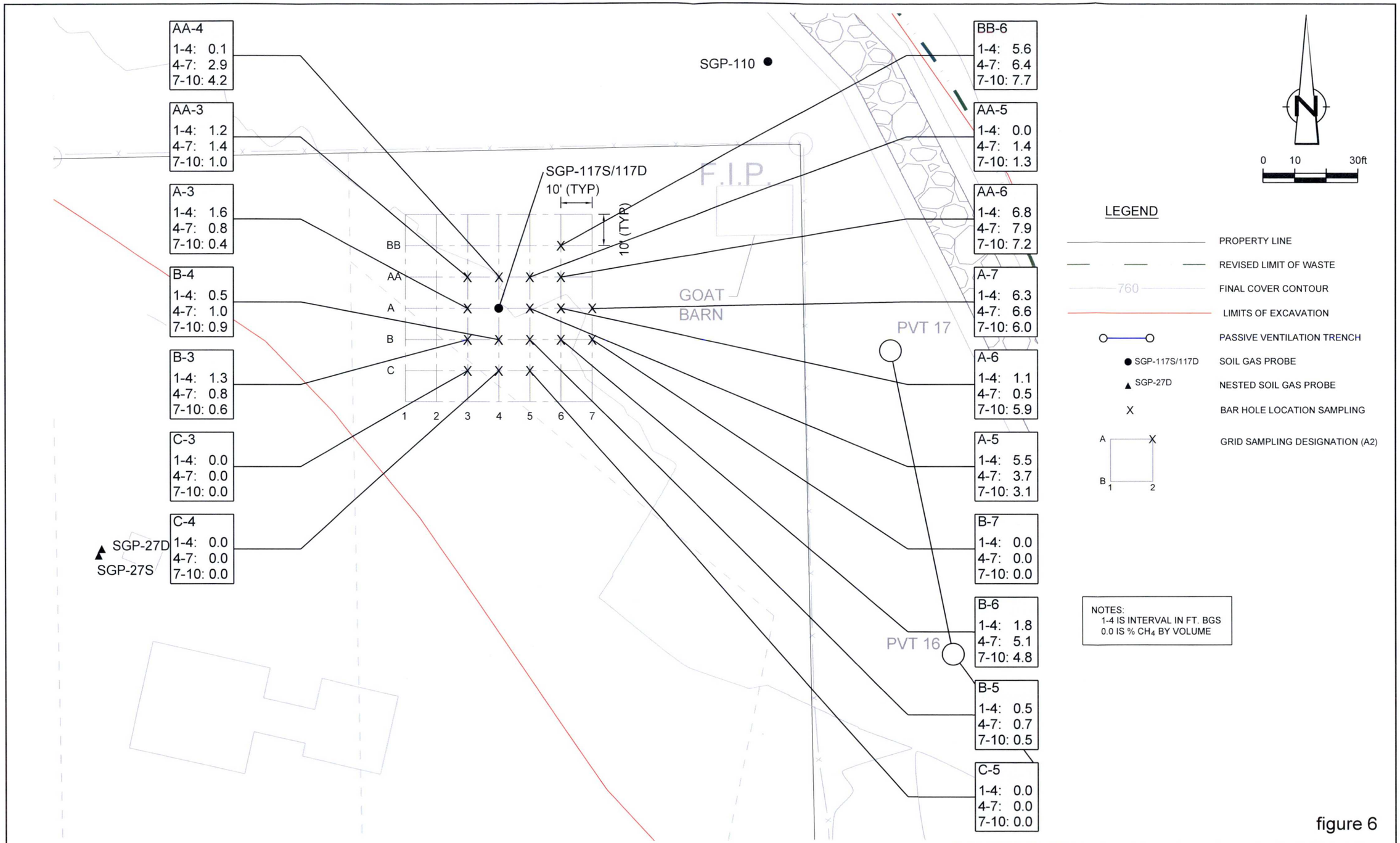

figure 6

COMPREHENSIVE BAR HOLE SAMPLE RESULTS
HIMCO SITE
Elkhart, Indiana

039611-40(ROSA053)GN-DE007 JUL 31/2014

TABLE 1

SOIL GAS MONITORING DATA
HIMCO SITE
ELKHART, INDIANA

		Pressure	Gas Quality/Combustible Gas Concentrations			
Location	Date	(in H_2O)	Methane %[1]	CO2 %[1]	O2 %[1]	H2S ppm
SGP-100	9/21/2012	0.0	0.0	6.1	16.3	0
	12/28/2012	0.0	2.1	7.4	15.4	0
	3/27/2013	0.0	3.4	6.2	18.8	0
	6/27/2013	0.0	0.3	15.1	6.8	0
	9/25/2013	0.0	0.1	6.0	16.9	0
	12/23/2013	0.0	0.5	6.3	16.1	0
	3/27/2014	0.0	2.6	9.4	9.1	0
	6/26/2014	0.0	28.8	35.9	0.0	0
	6/27/2014	0.0	22.2	38.7	0.0	0
	6/30/2014	0.05	5.9	30.4	0.0	0
	7/1/2014	0.0	11.1	31.3	0.1	0
	7/2/2014	0.0	13.3	32.3	0.1	1
	7/3/2014	0.0	4.5	28.6	0.0	0
	7/7/2014	0.0	0.2	24.6	1.2	0
	7/8/2014	0.0	0.4	25.4	0.9	0
	7/9/2014	0.00	0.0	22.1	3.7	0
	7/10/2014	0.00	0.0	17.9	6.8	0
	7/11/2014	0.01	0.0	16.0	8.2	0
	7/17/2014	-0.01	0.0	15.7	7.9	0
	7/24/2014	0.00	0.0	8.1	14.0	1
SGP-101	9/21/2012	0.0	0.0	4.0	17.0	0
	12/28/2012	0.0	0.1	0.2	20.2	0
	3/27/2013	0.0	0.0	0.2	21.9	0
	6/27/2013	0.0	0.0	3.1	16.9	0
	9/25/2013	0.0	0.0	2.0	18.9	0
	12/23/2013	0.0	0.0	0.7	20.6	0
	3/27/2014	0.0	0.0	0.3	20.7	0
	6/26/2014	0.0	0.0	2.2	17.5	0
	6/30/2014	0.05	0.0	1.5	19.9	0
	7/1/2014	0.0	0.0	1.4	18.9	0
	7/2/2014	0.0	0.0	1.2	18.8	1
	7/3/2014	0.0	0.0	2.0	18.5	0
SGP-102	9/21/2012	0.0	0.0	3.8	16.1	0
	12/28/2012	0.0	0.0	0.9	20.0	0
	3/27/2013	0.0	0.0	0.7	21.6	0
	6/27/2013	0.0	0.0	2.9	16.3	0
	9/25/2013	0.0	0.0	2.9	15.8	0
	12/23/2013	0.0	0.0	2.3	20.0	0
	3/27/2014	0.0	0.0	0.6	19.6	0
	6/26/2014	0.0	0.0	3.6	16.1	0
	6/30/2014	0.05	0.0	3.8	17.8	0
	7/1/2014	0.0	0.0	3.5	15.5	0
	7/2/2014	-0.01	0.0	3.5	16.1	0
	7/3/2014	0.0	0.0	3.4	17.5	0
SGP-103	9/21/2012	0.0	2.6	9.7	0.3	0
	12/28/2012	0.0	0.2	5.9	1.4	0
	3/27/2013	0.0	0.0	4.1	7.1	0
	6/27/2013	0.0	0.0	10.6	1.4	0
	9/25/2013	0.0	0.0	9.8	6.2	0
	12/23/2013	0.0	0.0	6.2	8.4	0
	3/27/2014	0.0	0.0	0.0	20.4	0
	6/26/2014	0.0	0.0	9.1	6.4	0
	6/30/2014	0.0	0.0	10.2	4.8	0
	7/1/2014	0.0	0.0	9.8	4.4	0
	7/2/2014	0.0	0.0	10.1	4.5	0
	7/3/2014	0.0	0.0	10.6	4.4	0
SGP-104	9/21/2012	0.0	0.0	8.4	12.1	0
	12/28/2012	0.0	0.2	3.4	12.6	0
	3/27/2013	0.0	0.0	2.5	18.8	0
	6/27/2013	-0.3	0.0	7.2	12.5	0
	9/25/2013	0.0	0.0	5.0	15.9	0
	12/23/2013	-0.02	0.0	1.9	19.8	0
	3/27/2014	0.0	0.0	0.6	20.4	0
	6/26/2014	0.0	0.0	5.8	13.2	0
	6/30/2014	0.0	0.0	7.2	11.6	0
	7/1/2014	0.0	0.0	6.8	10.8	0
	7/2/2014	0.0	0.0	7.3	10.1	0
	7/3/2014	0.01	0.0	7.6	10.3	0
SGP-105	9/21/2012	0.0	0.0	17.3	4.8	0
	12/28/2012	0.0	0.3	3.4	17.6	0
	3/27/2013	0.0	0.0	5.6	17.6	0
	6/27/2013	0.0	0.0	16.0	4.0	0
	9/25/2013	0.0	0.0	10.4	11.9	0
	12/23/2013	0.0	0.0	6.3	16.0	0
	3/27/2014	0.0	0.0	0.6	19.5	0
	6/26/2014	0.0	0.0	11.3	6.8	0
	6/30/2014	0.03	0.0	12.9	4.6	0
	7/1/2014	0.0	0.0	12.4	4.4	0
	7/2/2014	0.0	0.0	12.9	4.1	0
	7/3/2014	0.0	0.0	13.1	4.0	0

TABLE 1

SOIL GAS MONITORING DATA
HIMCO SITE
ELKHART, INDIANA

		Pressure	Gas Quality/Combustible Gas Concentrations			
Location	Date	(in H_2O)	Methane %[1]	CO2 %[1]	O2 %[1]	H2S ppm
SGP-106	9/21/2012	0.0	0.0	13.0	10.9	0
	12/28/2012	0.0	0.7	9.8	15.4	0
	3/27/2013	0.0	3.5	15.8	11.2	0
	6/27/2013	0.0	2.5	27.0	0.1	0
	9/25/2013	0.0	0.0	8.8	13.7	0
	12/23/2013	-0.01	0.0	6.1	16.6	0
	3/27/2014	0.05	0.7	15.4	5.5	0
	6/26/2014	0.01	13.0	29.3	0.1	0
	6/27/2014	0.02	15.2	32.2	0.0	0
	6/30/2014	0.03	11.4	31.5	0.0	0
	7/1/2014	0.03	13.6	31.0	0.1	0
	7/2/2014	0.0	5.0	12.4	8.6	0
	7/3/2014	0.0	8.5	28.8	0.0	0
	7/7/2014	0.01	9.5	29.5	0.0	0
	7/8/2014	0.0	10.3	30.1	0.0	0
	7/9/2014	-0.01	4.6	28.2	0.0	0
	7/10/2014	0.00	3.9	25.4	0.0	0
	7/11/2014	0.00	0.9	24.3	1.3	0
	7/17/2014	0.00	1.1	24.2	1.4	0
	7/24/2014	0.00	0	21.0	2.8	1
SGP-107	9/21/2012	0.0	24.9	32.6	0.9	0
	9/24/2012	0.0	29.6	34.0	0.1	0
	9/25/2012	0.0	29.7	34.6	0.1	0
	9/26/2012	0.0	18.4	29.2	2.2	0
	9/27/2012	0.0	28.1	34.0	0.5	0
	9/28/2012	0.0	28.2	33.6	0.0	0
	9/28/2012[2]	0.0	28.0	33.2	0.7	0
	10/1/2012[3]	0.0	29.1	34.6	0.0	0
	10/1/2012[2]	0.0	29.0	34.4	0.3	0
	10/2/2012	0.0	16.2	22.3	3.6	0
	10/3/2012	0.0	19.3	26.7	0.9	0
	10/4/2012	0.0	25.3	32.6	0.0	0
	10/5/2012	0.0	26.5	35.0	0.1	0
	10/12/2012	0.0	20.0	26.4	2.2	0
	10/19/2012	0.0	27.7	32.2	0.9	0
	12/28/2012	0.0	25.1	25.2	0.6	0
	1/3/2013	0.0	24.6	23.8	1.6	0
	1/10/2013	0.0	22.5	24.6	2.2	0
	1/17/2013	0.0	11.6	9.1	11.7	0
	2/28/2013	0.0	0.0	0.2	20.8	0
	3/27/2013	0.0	32.3	16.1	0.8	0
	4/25/2013	0.0	0.1	0.1	20.7	0
	5/29/2013	0.0	28.4	27.4	0.1	0
	6/27/2013	0.0	31.4	32.0	0.0	5
	7/25/2013	0.0	38.8	36.0	0.0	4
	8/29/2013	0.0	33.1	35.2	0.0	4
	9/25/2013	0.0	19.9	3.2	0.5	0
	11/27/2013	0.0	17.7	15.2	0.5	0
	12/17/2013	0.02	4.8	13.8	2.7	0
	12/23/2013	0.18	0.7	1.8	19.2	0
	1/29/2014	0.0	0.5	1.8	0.7	0
	2/25/2014	-0.01	0.4	1.0	4.3	0
	3/27/2014	1.38	0.2	0.3	16.2	0
	4/24/2014	0.01	7.58	13.8	11.6	5
	6/26/2014	-0.47	15.9	8.8	0.3	3
	6/27/2014	0.03	17.8	11.0	2.4	4
	6/30/2014	0.03	27.0	29.0	0.0	18
	7/1/2014	-0.6	22.3	18.4	0.9	23
	7/2/2014	-0.31	3.3	10.1	0.6	1
	7/3/2014	0.01	4.1	11.0	0.3	2
	7/7/2014	0.31	29.7	16.0	0.6	14
	7/8/2014	0.72	18.1	13.9	0.1	4
	7/9/2014	0.00	10.9	14.4	0.4	4
	7/10/2014	0.00	8.1	16.7	0.7	7
	7/11/2014	0.00	12.8	21.5	0.0	10
	7/17/2014	0.01	3.4	13.7	0.2	1
	7/24/2014	0.01	0	6.7	9.9	0

TABLE 1

SOIL GAS MONITORING DATA
HIMCO SITE
ELKHART, INDIANA

		Pressure	Gas Quality/Combustible Gas Concentrations			
Location	Date	(in H_2O)	Methane %[1]	CO2 %[1]	O2 %[1]	H2S ppm
SGP-108	9/21/2012	0.0	0.0	9.8	6.7	0
	12/28/2012	1.2	8.6	3.1	2.1	0
	1/3/2013	0.0	8.4	2.7	3.3	0
	1/10/2013	0.0	7.8	2.7	6.6	0
	1/17/2013	0.0	0.5	0.0	19.8	0
	2/28/2013	0.0	0.0	0.2	21.1	0
	3/27/2013	0.0	15.7	5.9	3.6	0
	4/25/2013	0.0	7.6	3.0	11.7	0
	5/29/2013	0.0	6.6	11.5	0.0	0
	6/27/2013	0.0	0.0	8.3	5.0	0
	7/25/2013	0.0	0.2	10.4	4.5	20
	8/29/2013	0.0	0.0	11.1	4.7	1
	9/25/2013	0.0	0.0	3.5	15.4	0
	11/27/2013	0.0	0.8	1.4	19.8	0
	12/17/2013	0.05	9.7	7.3	2.3	0
	12/23/2013	-0.05	0.1	0.5	20.6	0
	1/29/2014	0.13	7.1	2.5	9.8	0
	2/25/2014	0.04	9.3	3.7	9.0	0
	3/27/2014	0.0	0.4	2.0	19.0	0
	4/24/2014	0.0	0.0	0.2	20.5	0
	6/26/2014	0.0	1.3	1.7	16.9	0
	6/30/2014	0.0	2.8	4.6	14.0	0
	7/1/2014	0.0	3.0	5.6	10.0	0
	7/2/2014	0.01	0.9	2.2	16.3	0
	7/3/2014	0.0	3.4	8.3	7.8	0
SGP-109	9/21/2012	0.0	1.3	8.4	6.3	0
	12/28/2012	1.5	8.8	5.7	0.3	0
	1/3/2013	0.0	3.4	3.4	12.1	0
	1/10/2013	0.0	5.9	5.2	4.0	0
	1/17/2013	0.0	9.2	5.4	1.1	0
	2/28/2013	0.0	12.7	5.1	1.4	0
	3/27/2013	0.0	2.3	2.6	12.9	0
	4/25/2013	0.0	0.2	0.2	16.4	0
	5/29/2013	0.0	7.4	8.5	0.7	0
	6/27/2013	0.0	11.5	9.1	0.1	0
	7/25/2013	0.0	6.1	10.8	0.3	0
	8/29/2013	0.0	8.7	10.6	0.0	0
	9/25/2013	0.0	10.6	8.1	0.6	0
	11/27/2013	0.0	9.4	7.0	0.0	0
	12/17/2013	0.03	0.9	6.6	0.2	0
	12/23/2013	-0.07	3.6	4.7	8.9	0
	1/29/2014	-0.04	9.6	4.9	0.3	0
	2/25/2014	0.04	11.0	5.6	0.0	0
	3/27/2014	0.17	4.4	2.0	14.0	0
	3/28/2014	0.18	4.4	2.0	14.0	0
	4/24/2014	0.24	9.9	5.6	0.0	0
	6/26/2014	0.09	9.5	9.4	0.2	0
	6/27/2014	0.09	11.0	10.1	0.0	0
	6/30/2014	-0.19	9.3	10.3	0.0	0
	7/1/2014	0.06	7.3	9.3	0.2	0
	7/2/2014	0.01	7.7	9.8	0.2	0
	7/3/2014	0.0	9.4	10.5	0.1	0
	7/7/2014	0.01	9.4	10.8	0.1	0
	7/8/2014	0.02	9.5	11.1	0.0	0
	7/9/2014	-0.05	9.3	11.1	0.0	1
	7/10/2014	-0.01	8.9	10.6	0.0	0
	7/11/2014	0.00	9.2	10.7	0.1	0
	7/17/2014	-0.01	8.6	11.9	0.1	1
	7/24/2014	0.03	9.3	10.5	0.1	1

TABLE 1

SOIL GAS MONITORING DATA
HIMCO SITE
ELKHART, INDIANA

		Pressure	Gas Quality/Combustible Gas Concentrations			
Location	*Date*	*(in H_2O)*	*Methane %* [1]	*CO2 %* [1]	*O2 %* [1]	*H2S ppm*
SGP-110	9/21/2012	0.0	53.5	24.4	2.1	0
	9/24/2012	0.0	55.1	26.7	0.0	0
	9/25/2012	0.0	56.7	27.9	0.1	0
	9/26/2012	0.0	60.4	27.3	0.1	0
	9/27/2012	0.0	17.0	13.5	10.5	0
	9/28/2012	0.0	58.3	25.8	0.1	0
	9/28/2012 [2]	0.0	38.2	22.3	3.9	0
	10/1/2012 [3]	0.0	53.2	24.2	2.0	0
	10/1/2012 [2]	0.0	34.2	22.2	4.7	0
	10/2/2012	0.0	9.3	8.9	14.3	0
	10/3/2012	0.0	14.5	10.6	11.3	0
	10/4/2012	0.0	57.1	24.8	0.9	0
	10/5/2012	0.0	58.4	26.1	0.0	0
	10/12/2012	0.0	49.4	22.5	0.0	0
	10/19/2012	0.0	10.7	8.9	3.5	0
	12/28/2012	0.0	2.5	5.9	7.9	0
	1/3/2013	0.0	0.2	1.6	19.9	0
	1/10/2013	0.0	0.3	3.7	15.3	0
	1/17/2013	0.0	0.2	0.0	19.8	0
	2/28/2013	0.0	0.0	0.3	21.3	0
	3/27/2013	0.0	0.0	0.3	21.1	0
	4/25/2013	0.0	0.1	0.2	20.2	0
	5/29/2013	0.0	0.0	0.1	20.0	0
	6/27/2013	0.0	1.8	0.7	19.1	0
	7/25/2013	0.0	3.6	2.0	18.8	0
	8/29/2013	0.0	24.7	12.0	11.2	6
	9/25/2013	0.3	0.0	3.6	16.9	0
	11/27/2013	0.0	0.5	1.1	19.9	0
	12/17/2013	0.0	0.0	1.8	19.2	0
	12/23/2013	0	0.0	0.1	21.9	0
	1/29/2014	0	0.0	0.6	16.4	0
	2/25/2014	0.01	0.0	1.0	19.8	0
	3/27/2014	0.0	0.0	0.0	19.5	0
	3/28/2014	0.0	0.0	0.0	19.5	0
	4/24/2014	0.05	0.0	2.8	17.6	0
	6/26/2014	0.04	39.2	7.2	8.9	1
	6/27/2014	0.06	20.0	3.2	15.6	3
	6/30/2014	-0.77	34.0	7.2	11.0	1
	7/1/2014	0.14	26.1	6.0	11.1	0
	7/2/2014	0.05	27.6	6.5	11.8	1
	7/3/2014	0.15	22.8	5.0	0.0	0
	7/7/2014	0.14	26.3	6.8	12.8	1
	7/8/2014	0.0	0.4	0.1	20.6	0
	7/9/2014	0.00	0.0	0.1	20.1	0
	7/10/2014	0.00	0.0	0.2	19.8	0
	7/11/2014	0.00	0.0	0.1	20.2	0
	7/17/2014	0.00	0.0	0.9	17.6	2
	7/24/2014	0.00	0.4	4.2	11.7	0
SGP-111	9/21/2012	0.0	0.0	7.1	11.4	0
	12/28/2012	0.0	0.3	0.1	21.3	0
	3/27/2013	0.0	0.0	0.2	22.2	0
	6/27/2013	0.0	0.1	1.4	18.2	0
	9/25/2013	0.3	0.0	1.1	18.3	0
	12/23/2013	0	0.0	0.7	20.2	0
	3/27/2014	0.03	0.0	0.0	20.9	0
	6/26/2014	0.56	0.0	3.4	15.1	0
	6/30/2014	0.01	0.0	6.5	12.6	0
	7/1/2014	0.21	0.0	4.8	14.1	0
	7/2/2014	-0.08	0.0	5.6	14.5	0
	7/3/2014	0.0	0.0	3.6	17.5	0
SGP-112	9/21/2012	0.0	0.0	4.7	2.3	0
	12/28/2012	0.0	0.0	2.1	13.4	0
	3/27/2013	0.0	0.0	0.2	21.9	0
	6/27/2013	0.0	0.0	4.9	11.3	0
	9/25/2013	0.0	0	2.8	13.3	0
	12/23/2013	0.0	0.0	1.2	13.4	0
	3/27/2014	1.47	0.0	0.0	20.9	0
	6/26/2014	0.97	0.0	5.0	9.6	0
	6/30/2014	-0.55	0.0	4.5	12.6	0
	7/1/2014	0.08	0.0	4.4	11.5	0
	7/2/2014	0.27	0.0	3.2	15.2	0
	7/3/2014	0.12	0.0	1.3	19.1	0

TABLE 1

SOIL GAS MONITORING DATA
HIMCO SITE
ELKHART, INDIANA

		Pressure	Gas Quality/Combustible Gas Concentrations			
Location	Date	(in H_2O)	Methane %[1]	CO2 %[1]	O2 %[1]	H2S ppm
SGP-113	9/21/2012	0.0	1.4	7.6	2.0	0
	12/28/2012	0.0	0.0	3.5	9.2	0
	3/27/2013	0.0	1.9	3.5	0.7	0
	6/27/2013	0.0	3.0	5.3	5.0	0
	9/25/2013	0.0	0.0	1.1	17.8	0
	12/23/2013	0.0	0.0	1.5	17.5	0
	3/27/2014	2.12	0.0	0.0	20.9	0
	6/26/2014	0.0	0.0	5.9	4.2	0
	6/30/2014	-0.36	0.0	8.1	1.0	0
	7/1/2014	0.30	0.0	7.2	1.5	0
	7/2/2014	0.07	0.0	7.1	3.3	0
	7/3/2014	0.02	0.0	7.2	4.4	0
SGP-114	9/21/2012	0.0	24.9	29.7	0.4	0
	9/24/2012	0.0	24.8	28.5	0.0	0
	9/25/2012	0.0	25.0	29.9	0.0	8
	9/26/2012	0.0	24.1	28.8	1.1	10
	9/27/2012	0.0	23.9	29.0	1.3	10
	9/28/2012	0.0	23.5	28.2	1.3	8
	9/28/2012[2]	0.0	0.0	0.1	20.3	0
	10/1/2012[3]	0.0	24.5	29.4	0.0	7
	10/1/2012[2]	0.0	24.2	28.9	0.7	8
	10/2/2012	0.0	21.4	25.1	0.8	0
	10/3/2012	0.0	17.6	20.8	3.1	0
	10/4/2012	0.0	23.2	29.1	0.0	0
	10/5/2012	0.0	23.4	29.4	0.0	0
	10/12/2012	0.0	22.9	28.7	0.1	0
	10/19/2012	0.0	32.2	29.5	0.1	0
	12/28/2012	0.0	58.5	31.0	1.1	6
	1/3/2013	0.0	58.9	30.8	3.0	5
	1/10/2013	0.0	58.9	31.9	1.0	4
	1/17/2013	0.0	62.7	29.9	0.9	0
	2/28/2013	0.0	40.1	22.3	5.4	0
	3/27/2013	0.0	53.1	30.4	0.2	4
	4/25/2013	0.0	49.6	31.3	1.8	0
	5/29/2013	0.0	38.1	33.1	0.4	10
	6/27/2013	0.0	39.8	36.0	0.0	15
	7/25/2013	0.0	40.3	37.3	0.0	12
	9/25/2013	0.1	28.5	33.5	0.2	6
	11/27/2013	0.0	0.0	0.2	20.8	0
	12/17/2013	0.0	0.0	0.2	21.6	0
	12/23/2013	0.0	0.0	0.2	20.3	0
	1/29/2014	0.01	1.2	6.1	13.9	0
	2/25/2014	0.01	0.0	1.1	19.8	0
	3/27/2014	0.0	3.9	4.9	11.1	0
	4/24/2014	0.0	0.7	6.0	11.9	0
	6/26/2014	0.0	23.0	23.6	0.2	5
	6/27/2014	0.0	24.5	25.7	0.1	3
	6/30/2014	0.06	16.6	24.7	0.0	9
	7/1/2014	0.00	24.4	21.4	0.1	6
	7/2/2014	0.00	5.3	19.0	1.3	0
	7/3/2014	0.00	0.7	14.2	5.1	0
	7/7/2014	0.00	17.6	23.5	0.1	1
	7/8/2014	-0.01	18.9	24.5	0.2	1
	7/9/2014	-0.01	3.1	15.4	4.6	0
	7/10/2014	-0.01	1.6	15.9	2.9	1
	7/11/2014	-0.01	7	20.2	0.4	1
	7/17/2014	-0.01	27.7	26.0	0.2	0
	7/24/2014	0.00	20	16.8	7.3	1
SGP-115	12/28/2012	1.3	34.5	36.5	1.3	0
	1/3/2013	0.0	34.8	35.6	2.4	0
	1/10/2013	0.0	35.6	36.6	6.9	0
	1/17/2013	0.0	0.3	0.0	20.2	0
	2/28/2013	0.0	0.0	0.2	20.9	0
	3/27/2013	0.0	0.0	0.3	19.5	0
	4/25/2013	0.0	0.0	0.1	20.4	0
	5/29/2013	0.0	29.5	44.7	0.3	0
	6/27/2013	0.0	30.6	49.2	0.0	0
	7/25/2013	0.0	31.6	52.3	0.0	4
	8/29/2013	0.0	30.2	49.3	0.0	11
	9/25/2013	0.0	17.8	36.1	3.1	0
	11/27/2013	0.0	33.5	32.7	0.7	5
	12/17/2013	0.14	35.6	35.1	0.0	0
	12/23/2013	-0.39	7.1	11.3	14.0	0
	1/29/2014	0.09	37.1	29.6	0.0	0
	2/25/2014	0.18	37.6	28.4	0.0	0
	3/27/2014	0.62	35.3	26.3	1.8	0
	4/24/2014	0.25	33.2	28.0	0.0	0
	6/26/2014	0.26	37.0	34.4	0.2	0
	6/27/2014	0.27	43.2	42.0	0.0	0
	6/30/2014	0.26	32.2	37.1	0.0	0
	7/1/2014	0.51	33.7	37.5	0.1	0
	7/2/2014	-0.09	0.0	0.1	20.4	0
	7/3/2014	0.00	0.0	0.2	20.2	0
	7/7/2014	0.01	15.1	20.8	5.4	0
	7/8/2014	0.02	25.3	29.9	3.1	0
	7/9/2014	-0.06	0.0	0.2	19.8	0
	7/10/2014	0.00	0.0	0.5	15.1	0
	7/11/2014	-0.01	3.3	7.4	0.1	0
	7/17/2014	-0.01	25.6	31.8	0.0	0

TABLE 1

SOIL GAS MONITORING DATA
HIMCO SITE
ELKHART, INDIANA

		Pressure	Gas Quality/Combustible Gas Concentrations			
Location	Date	(in H_2O)	Methane %[1]	CO2 %[1]	O2 %[1]	H2S ppm
SGP-116	12/28/2012	1.9	58.4	46.5	0.6	0
	1/3/2013	0.0	59.8	45.6	1.3	0
	1/10/2013	0.0	61.8	45.4	4.1	0
	1/17/2013	0.0	52.6	40.6	1.6	0
	2/28/2013	0.0	0.0	0.2	21.6	0
	3/27/2013	0.0	53.2	41.4	0.6	0
	4/25/2013	0.0	0.0	0.1	20.5	0
	5/29/2013	0.0	41.7	40.9	0.5	0
	6/27/2013	0.0	51.5	48.4	0.1	0
	7/25/2013	0.0	48.9	50.9	0.0	0
	8/29/2013	0.0	49.0	47.6	0.0	5
	9/25/2013	0.0	21.7	31.7	1.1	0
	11/27/2013	0.05	49.9	42.2	0.0	0
	12/17/2013	0.22	57.8	42.1	0.1	0
	12/23/2013	-0.50	35.6	29.4	5.4	0
	1/29/2014	0.17	57.3	39.6	0.0	1
	2/25/2014	0.44	44.6	30.4	0.0	2
	3/27/2014	0.75	44.6	30.4	4.4	0
	4/24/2014	0.44	51.4	38.4	0.0	3
	6/26/2014	0.59	50.6	49.1	0.2	6
	6/27/2014	0.46	46.0	54.2	0.0	7
	6/30/2014	0.49	46.1	47.1	0.1	12
	7/1/2014	0.75	45.9	46.8	0.2	13
	7/2/2014	-0.06	42.5	43.1	2.2	0
	7/3/2014	0.03	50.5	49.1	0.0	3
	7/7/2014	0.05	50.9	49.2	0.0	10
	7/8/2014	0.08	50.5	49.4	0.0	8
	7/9/2014	-0.04	42.5	41.7	2.3	1
	7/10/2014	-0.02	48.8	48.6	0.6	1
	7/11/2014	-0.01	49.5	47.6	0.3	1
	7/17/2014	-0.01	45.3	46.1	0.4	1
SGP-117S	12/28/2012	0.0	2.2	14.9	0.3	0
	1/3/2013	0.0	1.9	10.7	7.4	0
	1/10/2013	0.0	2.0	14.7	3.6	0
	1/17/2013	0.0	2.5	13.5	0.7	0
	2/28/2013	0.0	0.2	1.4	14.7	0
	3/27/2013	0.0	3.2	12.0	0.0	0
	4/25/2013	0.0	4.6	12.3	0.9	0
	5/29/2013	0.0	4.0	14.5	0.0	0
	6/27/2013	0.0	3.7	15.5	0.3	0
	7/25/2013	0.0	4.3	18.2	0.1	0
	8/29/2013	0.0	3.4	19.7	0.0	1
	9/25/2013	0.0	2.6	15.5	1.8	0
	11/27/2013	-0.1	3.6	17.0	0.4	0
	12/17/2013	0.0	3.4	16.5	0.6	0
	12/23/2013	-0.07	3.3	14.7	0.2	0
	1/29/2014	0.02	3.0	13.9	0.0	0
	2/25/2014	0.03	2.9	11.1	0.7	0
	3/27/2014	0.12	3.1	7.2	9.3	0
	4/24/2014	0.13	6.2	12.5	0.1	0
	4/30/2014	0.0	3.3	8.6	1.8	nm
	5/1/2014	0.02	5.1	12.3	0.0	0
	5/2/2014	0.02	4.7	12.7	0.0	0
	5/3/2014	-0.08	5.1	13.0	0.0	0
	5/4/2014	0.0	4.9	13.2	0.0	0
	5/5/2014	0.10	4.7	13.2	0.0	0
	5/6/2014	0.0	5.0	13.5	0.0	0
	5/7/2014	0.0	3.7	12.6	0.0	0
	5/8/2014	0.0	4.9	12.4	0.0	0
	5/9/2014	0.05	4.9	13.7	0.0	0
	5/12/2014	0.00	6.5	14.8	0.0	0
	5/13/2014	0.05	5.0	15.3	0.0	0
	5/14/2014	0.00	4.7	15.2	0.0	0
	5/15/2014	0.10	4.1	14.2	0.1	nm
	5/16/2014	0.00	4.9	14.0	0.1	nm
	5/19/2014	0.00	5.2	15.8	0.0	0
	5/27/2014	0.00	5.4	14.4	0.0	0
	6/4/2014	0.08	5.7	15.6	0.0	0
	6/12/2014	0.01	5.9	16.5	0.0	0
	6/19/2014	-0.04	5.6	17.7	0.0	0
	6/26/2014	0.03	4.9	16.0	0.2	0
	6/30/2014	0.10	3.9	16.3	0.1	0
	7/1/2014	0.00	5.6	18.1	0.0	0
	7/2/2014	-0.01	5.5	18.0	0.1	0
	7/3/2014	0.00	5.4	18.0	0.1	0
	7/7/2014	0.02	5.5	18.5	0.0	0
	7/17/2014	0.00	4.7	18.7	0.0	1
	7/24/2014	0.01	2.5	8.7	10.4	0

TABLE 1

SOIL GAS MONITORING DATA
HIMCO SITE
ELKHART, INDIANA

		Pressure	Gas Quality/Combustible Gas Concentrations			
Location	Date	(in H_2O)	Methane %[1]	CO2 %[1]	O2 %[1]	H2S ppm
SGP-117D	12/28/2012	0.0	1.5	15.8	0.5	0
	1/3/2013	0.0	1.4	10.6	6.7	0
	1/10/2013	0.0	1.3	9.4	11.2	0
	1/17/2013	0.0	1.4	9.0	7.2	0
	2/28/2013	0.0	0.3	2.3	13.8	0
	3/27/2013	0.0	0.1	1.4	18.6	0
	4/25/2013	0.0	0.2	2.9	16.9	0
	5/29/2013	0.0	0.0	0.1	20.8	2
	6/27/2013	0.0	0.2	4.1	15.1	(5)
	7/25/2013	0.0	0.3	4.6	16.1	0
	8/29/2013	0.0	0.5	6.9	14.7	0
	9/25/2013	0.0	2.1	17.0	0.4	7
	11/27/2013	-0.1	2.6	18.0	0.7	0
	12/17/2013	0.0	2.4	17.0	0.9	0
	12/23/2013	-0.05	2.5	14.8	0.7	0
	1/29/2014	0.01	1.5	9.1	6.3	1
	2/25/2014	-0.01	0.1	0.1	22.5	0
	3/27/2014	0.30	0.1	0.0	20.8	0
	4/24/2014	-0.18	0.2	0.2	21.1	0
	4/30/2014	-16.1	0.0	0.9	20.7	nm
	5/1/2014	-0.09	0.1	0.1	20.9	0
	5/2/2014	-0.34	0.0	0.7	20.6	0
	5/3/2014	0.0	0.1	0.9	20.4	0
	5/4/2014	0.0	nm	nm	nm	nm
	5/5/2014	0.0	nm	nm	nm	nm
	5/6/2014	-4.25	nm	nm	nm	nm
	5/7/2014	0.00	nm	nm	nm	nm
	5/8/2014	0.00	nm	nm	nm	nm
	5/9/2014	0.00	nm	nm	nm	nm
	5/12/2014	0.05	nm	nm	nm	nm
	5/13/2014	0.00	nm	nm	nm	nm
	5/14/2014	0.00	nm	nm	nm	nm
	5/15/2014	0.09	nm	nm	nm	nm
	5/16/2014	0.00	nm	nm	nm	nm
	5/19/2014	0.00	nm	nm	nm	nm
	5/27/2014	0.00	nm	nm	nm	nm
	6/4/2014	-0.04	nm	nm	nm	nm
	6/12/2014	0.00	nm	nm	nm	nm
	6/19/2014	0.02	nm	nm	nm	nm
	6/26/2014	-4.70	nm	nm	nm	nm
	6/30/2014	0.20	nm	nm	nm	nm
	7/1/2014	-0.14	nm	nm	nm	nm
	7/2/2014	-0.14	nm	nm	nm	nm
	7/3/2014	-0.15	nm	nm	nm	nm
	7/7/2014	2.22	nm	nm	nm	nm
	7/17/2014	1.64	nm	nm	nm	nm
	7/24/2014	0.07	0.0	0.0	20.6	0
SGP-118	12/28/2012	0.0	60.0	41.4	1.2	0
	1/3/2013	0.0	61.1	41.5	1.1	0
	1/10/2013	1.9	0.3	0.0	19.7	0
	1/17/2013	0.0	0.2	0.0	21.3	0
	2/28/2013	-1.2	0.0	0.2	21.7	0
	3/27/2013	0.0	0.0	0.2	21.9	0
	4/25/2013	-1.4	0.0	0.1	20.6	0
	5/29/2013	0.0	46.4	40.0	1.7	0
	6/27/2013	1.4	52.0	47.2	0.2	7
	7/25/2013	0.9	49.5	49.6	0.0	7
	8/29/2013	0.0	48.4	49.1	0.1	2
	9/25/2013	0.0	49.7	48.6	0.1	2
	11/27/2013	0.3	55.3	44.7	0.0	7
	12/17/2013	0.3	59.4	39.3	1.3	5
	12/23/2013	-0.66	41.4	31.4	2.2	0
	1/29/2014	-0.05	12.1	9.4	14.5	0
	2/25/2014	0.55	43.8	30.2	0.0	0
	3/27/2014	0.70	60.4	36.5	0.0	0
	4/24/2014	0.60	56.9	40.5	0.0	2
	6/26/2014	0.85	50.7	49.1	0.2	11
	6/27/2014	0.66	44.6	55.5	0.0	10
	6/30/2014	0.74	44.1	45.2	0.0	9
	7/1/2014	1.12	50.1	49.9	0.2	13
	7/2/2014	0.03	43.2	46.1	0.1	3
	7/3/2014	0.17	35.7	42.9	0.0	0
	7/7/2014	0.15	50.6	49.3	0.0	2
	7/8/2014	0.22	50.1	49.8	0.0	9
	7/9/2014	-0.03	38.5	44.4	0.1	1
	7/10/2014	-0.02	24.9	36.4	0.1	1
	7/11/2014	-0.01	44.8	46.6	0.1	1
	7/17/2014	0.00	48.9	48.1	0.1	2

TABLE 1

SOIL GAS MONITORING DATA
HIMCO SITE
ELKHART, INDIANA

Location	Date	Pressure (in H_2O)	Gas Quality/Combustible Gas Concentrations Methane %[1]	CO2 %[1]	O2 %[1]	H2S ppm
SGP-119S	12/28/2012	0.0	4.8	7.6	15.3	0
	1/3/2013	0.0	4.0	7.2	16.0	0
	1/10/2013	0.0	2.6	6.2	16.0	0
	1/17/2013	0.0	10.4	10.5	14.5	0
	2/28/2013	0.0	6.9	7.7	17.2	0
	3/27/2013	0.0	3.0	5.4	18.8	0
	4/25/2013	0.0	8.0	10.6	14.8	0
	5/29/2013	0.0	0.0	4.2	16.9	0
	6/27/2013	0.0	0.0	6.4	14.1	0
	7/25/2013	0.0	0.0	5.9	15.6	0
	8/29/2013	0.0	0.0	3.7	16.6	0
	9/25/2013	0.0	0.0	3.8	17.8	0
	11/27/2013	0.0	0.0	3.0	18.2	0
	12/17/2013	0.0	0.0	2.5	15.9	0
	12/23/2013	0.0	0.0	2.2	18.6	0
	1/29/2014	0.02	0.0	2.3	21.0	0
	2/25/2014	0.0	0.0	1.7	19.9	0
	3/27/2014	0.0	0.0	0.5	20.7	0
	4/24/2014	0.0	0.0	1.4	19.2	0
	6/26/2014	0.0	0.0	4.6	15.2	0
	6/30/2014	0.03	0.0	3.9	17.2	0
	7/1/2014	0.00	0.0	3.6	15.4	0
	7/2/2014	0.00	0.0	4.1	16.6	0
	7/3/2014	0.00	0.0	4.3	17.1	0
SGP-119D	12/28/2012	0.0	6.8	12.4	11.5	0
	1/3/2013	0.0	5.3	4.4	11.2	0
	1/10/2013	0.0	3.8	11.2	13.0	0
	1/17/2013	0.0	15.6	15.3	10.0	0
	2/28/2013	0.0	7.8	9.2	14.1	0
	3/27/2013	0.0	4.4	8.1	17.0	0
	4/25/2013	0.0	7.4	6.5	13.0	0
	5/29/2013	0.0	0.0	5.2	16.4	0
	6/27/2013	0.0	0.0	7.7	13.2	0
	7/25/2013	0.0	0.0	8.1	14.2	0
	8/29/2013	0.0	0.0	5.1	15.5	0
	9/25/2013	0.0	0.0	5.1	16.6	0
	11/27/2013	0.0	0.0	3.4	17.6	0
	12/17/2013	0.0	0.0	3.2	15.5	0
	12/23/2013	0.0	0.0	2.7	18.4	0
	1/29/2014	0.0	0.0	2.5	20.7	0
	2/25/2014	0.01	0.0	1.9	19.8	0
	3/27/2014	0.0	0.0	0.3	20.7	0
	4/24/2014	0.0	0.0	1.4	19.1	0
	6/26/2014	0.0	0.0	4.5	15.0	0
	6/30/2014	0.0	0.0	4.5	16.6	0
	7/1/2014	0.0	0.0	4.3	15.0	0
	7/2/2014	0.0	0.0	4.5	16.4	0
	7/3/2014	0.0	0.0	4.8	16.7	0
SGP-13	9/24/2012	0.0	0.0	0.7	19.7	0
	9/25/2012	---	---	---	---	---
	9/26/2012	0.0	0.0	0.5	19.8	0
	9/27/2012	0.0	0.0	0.6	19.8	0
	9/28/2012	0.0	0.0	0.5	19.9	0
	10/1/2012	0.0	0.0	0.6	19.8	0
	10/2/2012	0.0	0.0	0.5	19.6	0
	10/3/2012	0.0	0.1	0.8	19.5	0
	10/4/2012	0.0	0.0	0.6	19.6	0
	10/5/2012	0.0	0.0	0.6	20.1	0
	10/12/2012	0.0	0.0	0.5	19.7	0
	10/19/2012	0.0	0.0	0.5	20.9	0
	12/28/2012	0.0	0.0	0.4	20.8	0
	1/3/2013	0.0	0.0	0.0	20.7	0
	1/10/2013	0.0	0.0	0.0	19.9	0
	1/17/2013	0.0	0.0	0.0	20.0	0
	2/28/2013	0.0	0.0	0.4	21.5	0
	3/27/2013	0.0	0.0	0.3	21.9	0
	4/25/2013	0.0	0.0	0.1	20.8	0
	5/29/2013	0.0	0.0	0.2	21.9	0
	6/27/2013	0.0	0.0	1.0	18.6	0
	7/25/2013	0.0	0.0	1.0	19.5	0
	8/29/2013	0.0	0.0	0.8	19.7	0
	9/25/2013	0.0	0.0	0.7	19.7	0
	11/27/2013	0.0	0.0	0.7	20.5	0
	12/17/2013	0.0	0.0	0.5	20.6	0
	12/23/2013	0.0	0.0	0.5	20.9	0
	1/29/2014	0.0	0.0	0.5	19.6	0
	2/25/2014	0.02	0.0	0.9	20.1	0
	3/27/2014	0.0	0.0	0.0	20.5	0
	4/24/2014	0.0	0.0	0.5	20.5	0
	6/26/2014	0.0	0.0	1.6	18.3	0
	6/30/2014	0.08	0.0	1.6	20.1	0
	7/1/2014	0.0	0.0	1.9	18.7	0
	7/2/2014	0.0	0.0	1.8	19.0	0
	7/3/2014	0.0	0.0	1.3	19.4	0

TABLE 1

SOIL GAS MONITORING DATA
HIMCO SITE
ELKHART, INDIANA

		Pressure	Gas Quality/Combustible Gas Concentrations			
Location	Date	(in H_2O)	Methane %[1]	CO2 %[1]	O2 %[1]	H2S ppm
SGP-14	9/24/2012	0.0	0.0	0.6	19.6	0
	9/25/2012	---	---	---	---	---
	9/26/2012	0.0	0.0	0.6	19.8	0
	9/27/2012	0.0	0.0	0.6	19.9	0
	9/28/2012	0.0	0.0	0.6	20.1	0
	10/1/2012	0.0	0.0	0.7	19.9	0
	10/2/2012	0.0	0.0	0.6	19.8	0
	10/3/2012	0.0	0.0	0.6	19.9	0
	10/4/2012	0.0	0.0	0.6	19.5	0
	10/5/2012	0.0	0.0	0.5	20.3	0
	10/12/2012	0.0	0.0	0.7	20.7	0
	10/19/2012	0.0	0.0	0.5	20.4	0
	12/28/2012	0.0	0.0	0.1	20.6	0
	1/3/2013	0.0	0.0	0.4	20.6	0
	1/10/2013	0.0	0.0	0.0	20.5	0
	1/17/2013	0.0	0.0	0.0	20.4	0
	2/28/2013	0.0	0.0	0.5	21.6	0
	3/27/2013	0.0	0.0	0.2	21.9	0
	4/25/2013	0.0	0.0	0.1	20.6	0
	5/29/2013	0.0	0.0	0.2	21.8	0
	6/27/2013	0.0	0.0	0.9	18.7	0
	7/25/2013	0.0	0.0	1.4	19.3	0
	8/29/2013	0.0	0.0	1.2	19.5	0
	9/25/2013	0.0	0.0	0.7	20.1	0
	11/27/2013	0.0	0.0	0.7	20.6	0
	12/17/2013	0.0	0.0	0.6	20.6	0
	12/23/2013	0.0	0.0	0.5	21.2	0
	1/29/2014	0.0	0.0	0.5	19.7	0
	2/25/2014	0.0	0.0	0.7	20.5	0
	3/27/2014	0.0	0.0	0.1	20.7	0
	4/24/2014	0.0	0.0	0.3	20.7	0
	6/26/2014	0.0	0.0	1.6	18.3	0
	6/30/2014	0.08	0.0	1.6	20.0	0
	7/1/2014	0.00	0.0	1.9	18.6	0
	7/2/2014	0.01	0.0	1.8	18.8	0
	7/3/2014	0.00	0.0	2.0	18.7	0
SGP-15	9/24/2012	0.0	0.0	0.3	20.0	0
	9/25/2012	---	---	---	---	---
	9/26/2012	0.0	0.0	0.0	19.9	0
	9/27/2012	0.0	0.0	0.0	20.2	0
	9/28/2012	0.0	0.0	0.6	20.1	0
	10/1/2012	0.0	0.0	0.0	20.2	0
	10/2/2012	0.0	0.0	0.0	20.1	0
	10/3/2012	0.0	0.0	0.0	19.6	0
	10/4/2012	0.0	0.0	0.9	19.2	0
	10/5/2012	0.0	0.0	0.0	19.9	0
	10/12/2012	0.0	0.0	0.0	20.1	0
	10/19/2012	0.0	0.0	0.0	19.8	0
	12/28/2012	0.0	0.0	0.3	20.5	0
	1/3/2013	0.0	0.0	0.3	20.5	0
	1/10/2013	0.0	0.0	0.4	20.4	0
	1/17/2013	0.0	0.0	0.0	20.5	0
	2/28/2013	0.0	0.0	0.2	21.6	0
	3/27/2013	0.0	0.0	0.2	21.8	0
	4/25/2013	0.0	0.0	0.1	20.7	0
	5/29/2013	0.0	0.0	0.2	21.9	0
	6/27/2013	(6)	(6)	(6)	(6)	(6)
	7/25/2013	0.0	0.0	1.7	19.1	0
	8/29/2013	0.0	0.0	1.5	19.3	0
	9/25/2013	0.0	0.0	0.6	20.5	0
	11/27/2013	0.0	0.0	1.5	19.7	0
	12/17/2013	0.0	0.0	1.1	20.2	0
	12/23/2013	0.0	0.0	0.3	20.9	0
	1/29/2014	0.0	0.0	0.2	19.8	0
	2/25/2014	0.0	0.0	0.3	20.7	0
	3/27/2014	0.0	0.0	0.1	20.8	0
	4/24/2014	0.0	0.0	0.4	20.8	0
	6/26/2014	0.0	0.0	1.8	18.4	0
	6/30/2014	0.03	0.0	1.7	19.8	0
	7/1/2014	0.00	0.0	1.9	18.6	0
	7/2/2014	0.00	0.0	1.9	18.9	0
	7/3/2014	0.00	0.0	1.9	18.7	0

TABLE 1

SOIL GAS MONITORING DATA
HIMCO SITE
ELKHART, INDIANA

Location	Date	Pressure (in H_2O)	Gas Quality/Combustible Gas Concentrations Methane % [1]	CO2 % [1]	O2 % [1]	H2S ppm
SGP-16	1/17/2013	0.0	0.0	0.0	19.9	0
	2/28/2013	0.0	0.0	0.4	21.3	0
	3/27/2013	0.0	0.0	0.3	21.7	0
	4/25/2013	0.0	0.0	0.1	20.6	0
	5/29/2013	0.0	0.0	0.3	21.8	0
	6/27/2013	(6)	(6)	(6)	(6)	(6)
	7/25/2013	(6)	(6)	(6)	(6)	(6)
	8/29/2013	(6)	(6)	(6)	(6)	(6)
	9/25/2013	0.0	0.0	1.1	20.1	0
	11/27/2013	0.0	0.0	0.9	20.2	0
	12/17/2013	0.0	0.0	0.8	20.3	0
	12/23/2013	0.0	0.0	0.8	21.5	0
	1/29/2014	0.0	0.0	0.7	19.3	0
	2/25/2014	0.0	0.0	1.1	20.1	0
	3/27/2014	0.0	0.0	0.0	20.9	0
	4/24/2014	0.0	0.0	0.6	20.6	0
	6/26/2014	0.0	0.0	0.0	20.4	0
	6/30/2014	0.03	0.0	2.2	19.1	0
	7/1/2014	0.00	0.0	2.6	17.7	0
	7/2/2014	0.01	0.0	2.5	18.2	0
	7/3/2014	0.00	0.0	2.5	18.2	0
SGP-27S	9/24/2012	0.0	0.0	0.7	19.7	0
	9/25/2012	---	---	---	---	---
	9/26/2012	0.0	0.0	0.0	20.1	0
	9/27/2012	0.0	0.0	0.7	19.8	0
	9/28/2012	0.0	0.0	0.6	19.6	0
	10/1/2012	0.0	0.0	0.6	20.1	0
	10/2/2012	0.0	0.0	0.6	19.9	0
	10/3/2012	0.0	0.0	0.8	19.8	0
	10/4/2012	0.0	0.0	0.8	19.2	0
	10/5/2012	0.0	0.0	1.0	19.6	0
	10/12/2012	0.0	0.0	0.7	20.0	0
	10/19/2012	0.0	0.0	0.8	19.9	0
	12/28/2012	0.0	0.0	0.2	21.1	0
	1/3/2013	(4)	(4)	(4)	(4)	(4)
	1/10/2013	0.0	0.2	0.0	20.0	0
	1/17/2013	0.0	0.0	0.0	20.3	0
	2/28/2013	0.0	0.0	0.2	21.7	0
	3/27/2013	0.0	0.0	0.2	21.8	0
	4/25/2013	0.0	0.0	0.1	20.4	0
	5/29/2013	0.0	0.0	0.7	20.3	0
	6/27/2013	0.0	0.0	0.7	18.8	0
	7/25/2013	0.0	0.0	1.2	19.6	0
	8/29/2013	0.0	0.0	1.0	19.7	0
	9/25/2013	0.0	0.0	0.3	20.3	0
	11/27/2013	0.0	0.0	0.2	20.7	0
	12/17/2013	0.0	0.0	0.1	20.4	0
	12/23/2013	0.0	0.0	0.1	21.6	0
	1/29/2014	0.0	0.0	0.7	19.7	0
	2/25/2014	0.0	0.0	0.9	20.8	0
	3/27/2014	0.0	0.0	0.3	20.9	0
	4/24/2014	0.0	0.0	0.6	20.6	0
	4/30/2014	0.0	0.0	0.9	20.1	nm
	5/1/2014	0.0	0.0	0.9	21.0	0
	5/2/2014	-0.01	0.0	0.7	20.6	0
	5/3/2014	0.0	0.1	0.7	20.5	0
	5/4/2014	0.0	0.0	0.6	20.1	0
	5/5/2014	0.0	0.0	0.6	19.9	0
	5/6/2014	0.0	0.0	0.7	20.5	0
	5/7/2014	0.0	0.0	0.6	20.1	0
	5/8/2014	0.0	0.0	0.5	19.8	0
	5/9/2014	0.0	0.0	0.5	20.0	0
	5/12/2014	0.0	0.0	0.0	20.5	0
	5/13/2014	0.0	0.0	0.8	20.0	0
	5/14/2014	0.0	0.0	0.8	20.0	0
	5/15/2014	0.30	0.0	0.9	20.4	nm
	5/16/2014	0.0	0.0	0.9	20.0	nm
	5/19/2014	0.0	0.0	0.9	19.8	0
	5/27/2014	0.0	0.0	1.0	20.7	0
	6/4/2014	0.0	0.0	1.2	20.2	0
	6/12/2014	0.01	0.0	1.0	19.7	0
	6/19/2014	0.0	0.0	1.0	19.1	0
	6/26/2014	0.0	0.0	1.3	18.1	0
	6/30/2014	0.08	0.0	1.3	19.4	0
	7/1/2014	0.0	0.0	1.7	18.8	0
	7/2/2014	0.0	0.0	1.5	19.8	0
	7/3/2014	0.0	0.0	1.6	19.3	0
	7/7/2014	0.0	0.0	1.5	19.4	0
	7/18/2014	0.0	0.0	1.1	19.6	0
	7/24/2014	0.0	0.0	0.4	20.1	0

TABLE 1

SOIL GAS MONITORING DATA
HIMCO SITE
ELKHART, INDIANA

		Pressure	Gas Quality/Combustible Gas Concentrations			
Location	Date	(in H_2O)	Methane %[1]	CO2 %[1]	O2 %[1]	H2S ppm
SGP-27D	9/24/2012	0.0	0.0	0.7	19.8	0
	9/25/2012	---	---	---	---	---
	9/26/2012	0.0	0.0	0.9	19.5	0
	9/27/2012	0.0	0.0	0.9	19.7	0
	9/28/2012	0.0	0.0	0.8	19.4	0
	10/1/2012	0.0	0.0	0.9	19.6	0
	10/2/2012	0.0	0.0	0.8	19.7	0
	10/3/2012	0.0	0.0	0.9	19.7	0
	10/4/2012	0.0	0.0	1.1	18.8	0
	10/5/2012	0.0	0.0	1.0	19.8	0
	10/12/2012	0.0	0.0	0.9	19.8	0
	10/19/2012	0.0	0.0	1.0	19.8	0
	12/28/2012	0.0	0.0	0.2	21.0	0
	1/3/2013	0.0	0.0	0.5	20.4	0
	1/10/2013	0.0	0.0	0.2	19.6	0
	1/17/2013	0.0	0.2	0.0	20.3	0
	2/28/2013	0.0	0.0	0.3	21.7	0
	3/27/2013	0.0	0.0	0.6	21.5	0
	4/25/2013	0.0	0.0	0.7	20.0	0
	5/29/2013	0.0	0.0	0.1	21.0	0
	6/27/2013	0.0	0.0	0.8	18.9	0
	7/25/2013	0.0	0.0	1.5	19.2	0
	8/29/2013	0.0	0.0	0.8	19.1	0
	9/25/2013	0.0	0.0	0.9	20.1	0
	11/27/2013	0.0	0.0	1.0	20.1	0
	12/17/2013	0.0	0.0	0.8	20.0	0
	12/23/2013	0.1	0.0	0.7	21.1	0
	1/29/2014	0.0	0.0	0.7	20.3	0
	2/25/2014	0.01	0.0	0.9	20.9	0
	3/27/2014	0.0	0.0	0.4	20.8	0
	4/24/2014	0.0	0.0	0.5	20.7	0
	4/30/2014	0.0	0.0	0.9	20.3	nm
	5/1/2014	0.0	0.0	0.9	21.0	0
	5/2/2014	-0.01	0.0	0.7	20.8	0
	5/3/2014	0.0	0.1	0.8	20.5	0
	5/4/2014	0.0	0.0	0.7	20.0	0
	5/5/2014	0.0	0.0	0.7	19.8	0
	5/6/2014	0.0	0.0	0.7	20.5	0
	5/7/2014	0.0	0.0	0.7	19.9	0
	5/8/2014	0.0	0.0	0.4	19.9	0
	5/9/2014	0.0	0.0	0.6	19.9	0
	5/12/2014	0.0	0.0	0.6	20.7	0
	5/13/2014	0.0	0.0	0.7	20.2	0
	5/14/2014	0.0	0.0	0.7	20.2	0
	5/15/2014	0.32	0.0	0.8	20.4	nm
	5/16/2014	0.0	0.0	0.8	20.3	nm
	5/19/2014	0.0	0.0	0.9	19.8	0
	5/27/2014	0.0	0.0	1.0	19.6	0
	6/4/2014	0.0	0.0	1.3	20.1	0
	6/12/2014	0.01	0.0	1.1	19.9	0
	6/19/2014	0.0	0.0	1.1	19.2	0
	6/26/2014	0.0	0.0	1.1	18.3	0
	6/30/2014	0.08	0.0	1.3	19.4	0
	7/1/2014	0.0	0.0	1.7	18.8	0
	7/2/2014	0.0	0.0	1.5	19.6	0
	7/3/2014	0.0	0.0	1.6	19.3	0
	7/7/2014	0.0	0.0	1.6	19.3	0
	7/18/2014	0.0	0.0	1.2	19.6	0
	7/24/2014	0.0	0.0	0.5	20.0	0
SGP-25S	12/17/2013	0.3	0.0	1.1	19.4	0
	1/29/2014	0.0	0.0	1.6	18.6	0
	2/25/2014	0.0	0.0	1.9	19.7	0
	7/3/2014	0.0	0.0	2.1	19.1	0
	7/7/2014	0.0	0.0	1.8	19.1	0
	7/18/2014	0.0	0.0	1.3	19.3	0
	7/24/2014	0.0	0.0	0.8	19.9	0
SGP-25D	12/17/2013	0.0	0.0	0.1	19.9	0
	1/29/2014	0.02	0.0	1.6	18.5	0
	2/25/2014	0.0	0.0	1.8	19.8	0
	7/3/2014	0.0	0.0	2.3	18.8	0
	7/7/2014	-0.01	0.0	2.1	18.9	0
	7/18/2014	0.00	0.0	1.6	19.1	0
	7/24/2014	0.00	0.0	1.0	19.3	0

TABLE 1

SOIL GAS MONITORING DATA
HIMCO SITE
ELKHART, INDIANA

		Pressure	Gas Quality/Combustible Gas Concentrations			
Location	Date	(in H_2O)	Methane %[1]	CO2 %[1]	O2 %[1]	H2S ppm
SGP-26S	12/17/2013	0.0	0.0	0.8	19.8	0
	1/29/2014	0.0	0.0	1.0	19.4	0
	2/25/2014	0.0	0.0	1.1	20.7	0
	7/3/2014	0.0	0.0	1.9	19.1	0
	7/7/2014	0.0	0.0	1.7	19.1	0
	7/18/2014	0.0	0.0	1.3	19.1	0
	7/24/2014	0.0	0.0	1.2	19.3	0
SGP-26D	12/17/2013	0.0	0.0	0.1	20.2	0
	1/29/2014	0.1	0.0	1.0	19.3	0
	2/25/2014	0.0	0.0	1.1	20.8	0
	7/3/2014	0.0	0.0	1.9	19.1	0
	7/7/2014	0.0	0.0	1.8	19.1	0
	7/18/2014	0.0	0.0	1.4	19.1	0
	7/24/2014	0.0	0.0	1.3	19.2	0

Notes:

1 - Percent by volume.
2 - Valve opened for 30 minutes and closed prior to reading.
3 - Valves at SGP107, SGP110 and SGP114 were left open overnight on October 1, 2012.
4 - Broken valve; no monitoring at this location on this date.
5 - There was a pump error at the time of measurement.
6 - Soil gas probes were not accessible during the monitoring event.
nm - not monitored or not monitored due to presence of water in vacuum tube leading to instrument pump shut off.

TABLE 2

BAR HOLE GRID TABULATED METHANE RESULTS
HIMCO SITE
ELKHART, INDIANA

Sample Location	Sample Interval	Column Location 3	4	5	6	7
BB	1-4	---	---	---	5.6	---
	4-7	---	---	---	6.4	---
	7-10	---	---	---	7.7	---
AA	1-4	1.2	0.1	0.0	6.8	---
	4-7	1.4	2.9	1.4	7.9	---
	7-10	1.0	4.2	1.3	7.2	---
A	1-4	1.6	(1)	5.5	1.1	6.3
	4-7	0.8	(1)	3.7	0.5	6.6
	7-10	0.4	(1)	3.1	5.9	6.0
B	1-4	1.3	0.5	0.5	1.8	0.0
	4-7	0.8	1.0	0.7	5.1	0.0
	7-10	0.6	0.9	0.5	4.8	0.0
C	1-4	0.0	0.0	0.0	---	---
	4-7	0.0	0.0	0.0	---	---
	7-10	0.0	0.0	0.0	---	---

Notes:
(1) Location of SGP-117S
BB-6 = methane concentration in percent by volume, per incremental depth

Attachment A

USEPA Correspondence (June 13, 2014)

CONESTOGA-ROVERS
& ASSOCIATES

14496 Sheldon Road, Suite 200, Plymouth, Michigan 48170
Telephone: (734) 453-5123 Fax: (734) 453-5201
www.CRAworld.com

June 13, 2014

Reference No. 039611

Mr. Rosauro del Rosario
EPA Project Manager/Coordinator
U.S. Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

Dear Mr. del Rosario:

Re: Methane Remedial Action Plan – SGP-117S
Himco Site
Elkhart, Indiana

On behalf of the Himco Site Trust, Conestoga-Rovers & Associates (CRA) has prepared this Methane Remedial Action Plan for soil gas probe 117S (SGP-117S) (MRAP SGP-117S) for the Himco Site (Site) located in Elkhart, Indiana.

The purpose of this MRAP SGP-117S is to identify a plan of action to investigate elevated methane detections in SGP-117S at the Site, in accordance with the Final Operation and Maintenance Plan (O&M Plan CRA, 2012). This MRAP SGP-117S is being submitted within 30 days of the end of the verification period.

Monitoring

Figures 1 and 2 presents the Site with all SGPs and an enlarged view of SGP-117S and surrounding probe locations, respectively. Table 1 presents the soil gas data collected at soil gas probes in proximity to SGP-117S since the installation of the additional southern section of passive ventilation trench (PVT) in October 2013. CRA initiated contingency monitoring in accordance with the O&M Plan as methane was detected on April 24, 2014 at SGP-117S at a concentration greater than the O&M Plan action level. This included daily contingency monitoring from April 30, 2014 through May 16, 2014, and weekly monitoring starting May 19, 2014. On behalf of the Himco Site Trust, CRA also voluntarily monitored SGPs 27S/27D (near the Bowers'/Williams' residence) during the contingency monitoring period since they are adjacent to potential receptors.

Figure 3 presents SGP-117S and surrounding probe locations with the highest methane concentration since the installation of the PVT in October 2013. The elevated readings at SGP-117S appear to be isolated to this particular location. SGP-110 located between SGP-117S and the landfill had a maximum methane concentration of 0.5 percent by volume since

October 2013. The other SGPs surrounding SGP-117S had zero methane readings with the exception of SGP-109 on February 25, 2014 which had a reading of 11.0 percent by volume. Readings from SGP-117D have not been measured since May 4, 2014 as the water table was elevated above the screen interval of 10 to 11 feet below ground surface (ft bgs) for the soil gas probe.

Since the installation of the additional southern section of PVT, there have been only eight instances from 24 sampling events when the methane concentration exceeded the action level at SGP-117S. Additionally, the average methane concentration was 4.48 percent from the 24 sampling events.

SGP-117S is located within the former CDA portion of the Site. The remedial action was determined in the 2007 Consent Decree (CD) requiring the upper 6 feet of contaminated soil be removed and replaced with clean soil. In the location of SGP-117S, approximately 6.5 to 7.5 feet of soil were removed and replaced with clean soil to achieve final design grade. SGP-117S/D was installed on December 18, 2012, which is after the completion of the remedial action for the Site. The stratigraphic logs in Attachment A show the upper 8.3 feet as a silty clay with a seam of debris was located at 8.3 ft bgs. The sand below the debris is the native sand for the Site. SGP-117S is screened from 6.5 to 8.0 ft bgs at the bottom of the silty clay. The silty clay is impeding the methane from naturally venting to the atmosphere, thereby resulting in a localized concentration of methane.

The MRAP SGP-117S proposed herein includes a further investigation of the source of methane at SGP-117S by using a direct push drilling methods (Geoprobe) to do bar hole soil gas sampling. The Himco Site Trust may propose additional measures to mitigate detections of methane at the Site if there is a risk to receptors.

Proposed Bar Hole Soil Gas Sampling

CRA proposes to investigate the area around SGP-117S/D laterally and vertically by using bar hole soil gas sampling methods. Figure 4 presents the three locations with a 10-foot grid around SGP-117S/D. The bar hole locations will be 10 feet in the west, south and east direction around SGP-117S/D. CRA will direct push at each primary location until 10 feet or until groundwater is encountered. A CRA geologist will log the soil and collect soil gas quality readings every 2 feet to isolate the interval if methane is detected. If methane concentrations are 5 percent by volume (i.e., above the action level), CRA will step out in each direction to further delineate the extent of methane within the area. If an interval is exhibiting methane readings greater than the action level (i.e., 5 percent methane by volume) and is located toward

the receptor, a soil gas probe will be installed. The probe will be installed in accordance with Section 5.8.2 of the 100% Design Report, with a minimum 1-foot screen and maximum 4-foot screened interval. The depth of the probes will depend on the interval in which the methane was detected. The new soil gas probe will be added to the soil gas network and will be monitored as per the Operational and Maintenance (O&M) Plan.

The bar hole drilling and sampling procedure will follow the below procedures:

- The Geoprobe will advance to a total depth of 10 feet or to the depth of the groundwater table in 2-foot increments.
- At each 2-foot increment (2, 4, 6, 8, 10 feet), a metal screen will be exposed.
- A Landtec GEM portable gas analyzer will then sample each interval for methane, carbon dioxide, and oxygen until the GEM is displaying stabilized soil gas readings.

CRA will monitor the new SGPs if installed along with SGP-117S/D and 27S/27D on a weekly basis until the soil gas levels are less than the action level for three consecutive weeks as per the O&M Plan. Monitoring procedures will be consistent with Section 3.2 of the Final O&M Plan (CRA, 2012).

CRA will submit a data report and recommendations within 30 days of the bar hole investigation event. Please contact me at (734) 453-5123 if you have questions or require additional information.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

Douglas M. Gatrell, PE

DMG/ds/53
Encl.
cc: Gary Toczylowski, Bayer HealthCare
Tom Lenz, Bayer HealthCare
Christopher Fassero, USACE (3 copies)
Doug Petroff, IDEM (2 copies)
Alan Van Norman, CRA (electronic)

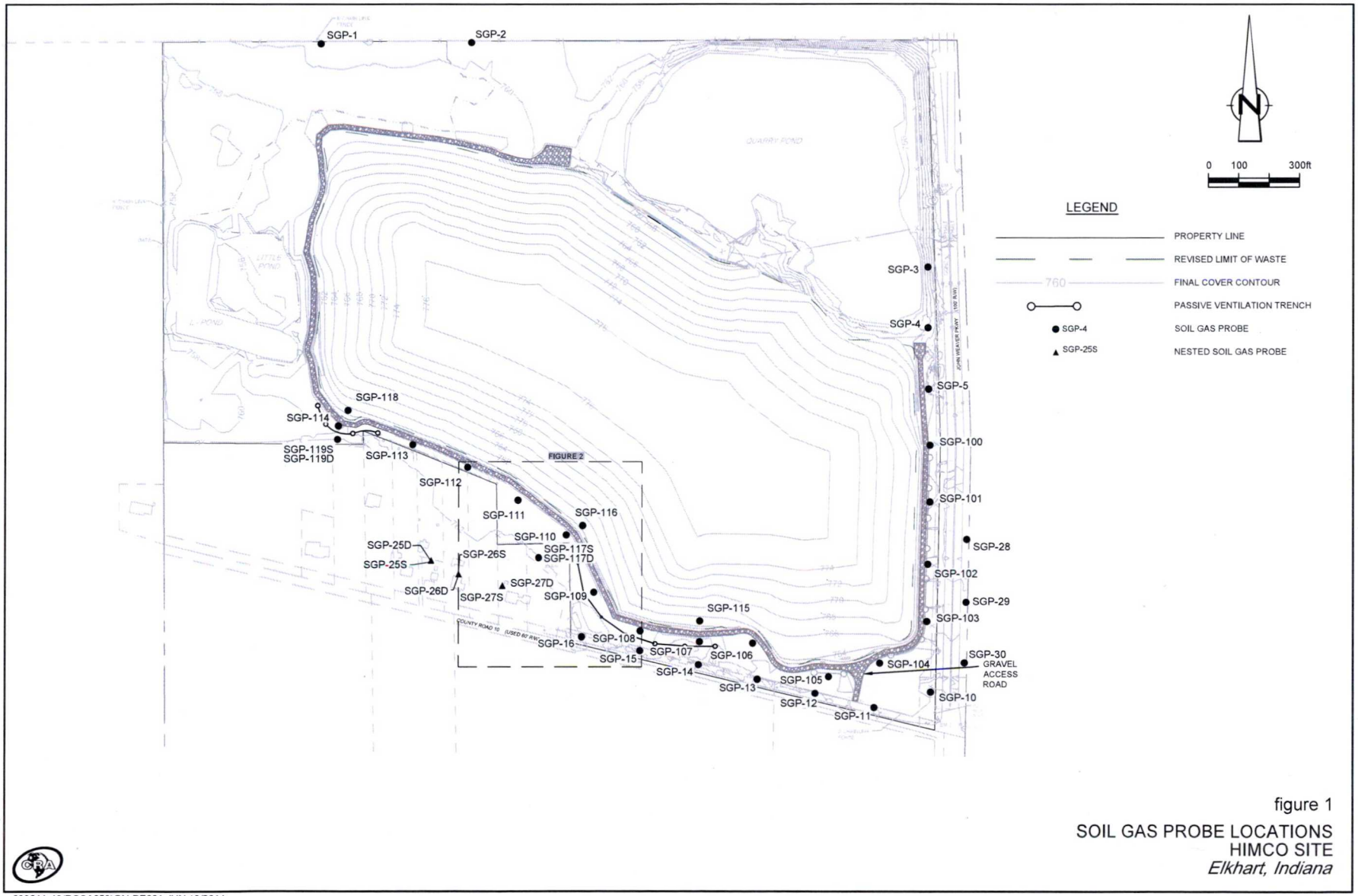

figure 1

SOIL GAS PROBE LOCATIONS
HIMCO SITE
Elkhart, Indiana

039611-40(ROSA053)GN-DE001 JUN 13/2014

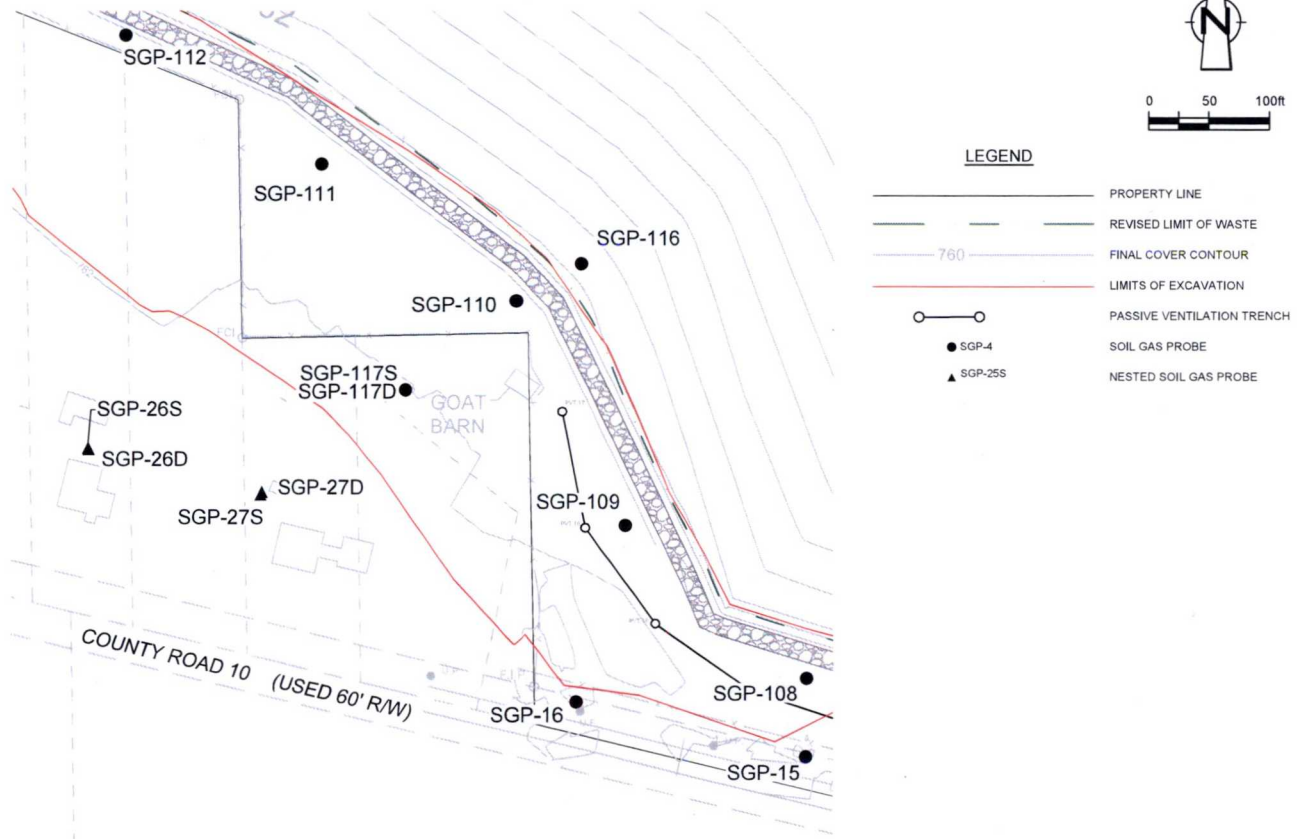

figure 2

SOIL GAS PROBE LOCATIONS NEAR SGP-117S
HIMCO SITE
Elkhart, Indiana

039611-40(ROSA053)GN-DE002 JUN 13/2014

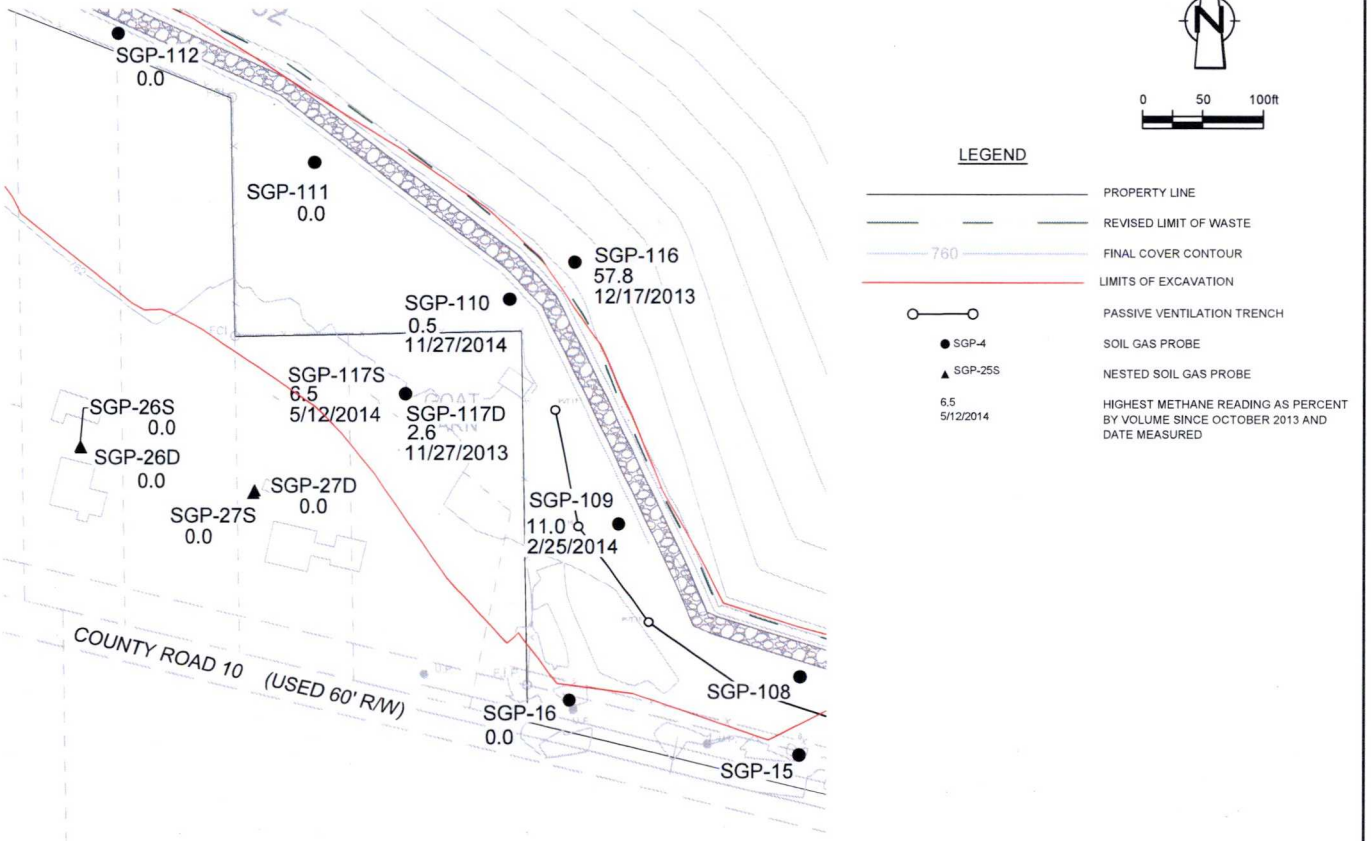

figure 3

METHANE READINGS AT LOCATIONS NEAR SGP-117S
HIMCO SITE
Elkhart, Indiana

039611-40(ROSA053)GN-DE003 JUN 13/2014

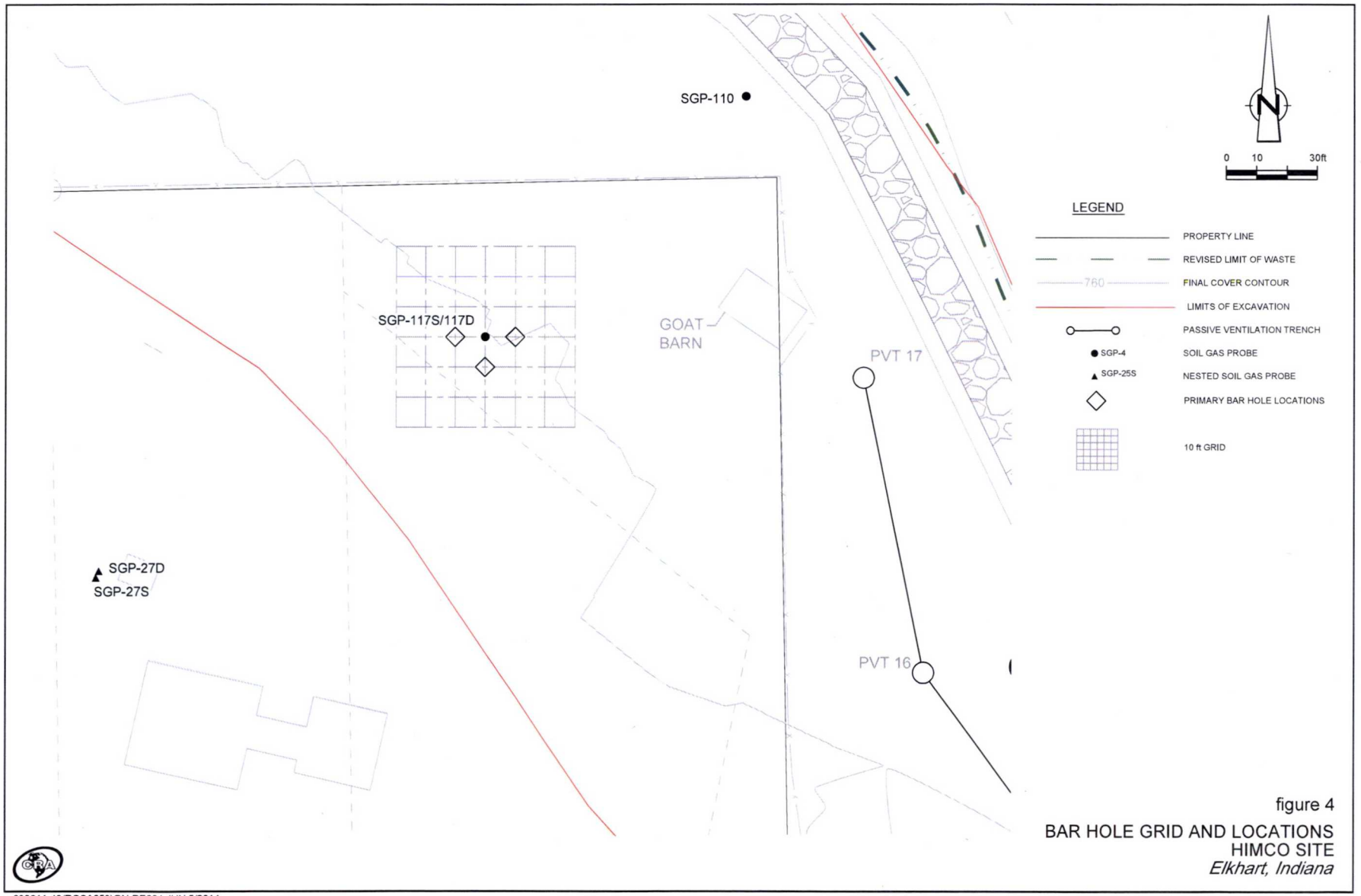

figure 4

BAR HOLE GRID AND LOCATIONS
HIMCO SITE
Elkhart, Indiana

039611-40(ROSA053)GN-DE004 JUN 5/2014

TABLE 1

SOIL GAS MONITORING DATA FROM OCTOBER 2013 TO JUNE 2014
HIMCO SITE
ELKHART, INDIANA

		Pressure	Gas Quality/Combustible Gas Concentrations			
Location	*Date*	*(in H_2O)*	*Methane %* [1]	*CO2 %* [1]	*O2 %* [1]	*H2S %* [1]
SGP-109	11/27/2013	0.0	9.4	7.0	0.0	0
	12/17/2013	0.03	0.9	6.6	0.2	0
	12/23/2013	-0.07	3.6	4.7	8.9	0
	1/29/2014	-0.04	9.6	4.9	0.3	0
	2/25/2014	0.04	11.0	5.6	0.0	0
	3/27/2014	0.17	4.4	2.0	14.0	0
	3/28/2014	0.18	4.4	2.0	14.0	0
	4/24/2014	0.24	9.9	5.6	0.0	0
SGP-110	11/27/2013	0.0	0.5	1.1	19.9	0
	12/17/2013	0.0	0.0	1.8	19.2	0
	12/23/2013	0.0	0.0	0.1	21.9	0
	1/29/2014	0.0	0.0	0.6	16.4	0
	2/25/2014	0.01	0.0	1.0	19.8	0
	3/27/2014	0.0	0.0	0.0	19.5	0
	3/28/2014	0.0	0.0	0.0	19.5	0
	4/24/2014	0.05	0.0	2.8	17.6	0
SGP-111	12/23/2013	0.0	0.0	0.7	20.2	0
	3/27/2014	0.03	0.0	0.0	20.9	0
SGP-116	11/27/2013	0.05	**49.9**	42.2	0.0	0
	12/17/2013	0.22	**57.8**	42.1	0.1	0
	12/23/2013	-0.50	**35.6**	29.4	5.4	0
	1/29/2014	0.17	**57.3**	39.6	0.0	1
	2/25/2014	0.44	**44.6**	30.4	0.0	2
	3/27/2014	0.75	**44.6**	30.4	4.4	0
	4/24/2014	0.44	**51.4**	38.4	0.0	3
SGP-117S	11/27/2013	-0.1	3.6	17.0	0.4	0
	12/17/2013	0.0	3.4	16.5	0.6	0
	12/23/2013	-0.07	3.3	14.7	0.2	0
	1/29/2014	0.02	3.0	13.9	0.0	0
	2/25/2014	0.03	2.9	11.1	0.7	0
	3/27/2014	0.12	3.1	7.2	9.3	0
	4/24/2014	0.13	**6.2**	12.5	0.1	0
	4/30/2014	0.0	3.3	8.6	1.8	nm
	5/1/2014	0.02	**5.1**	12.3	0.0	0
	5/2/2014	0.02	4.7	12.7	0.0	0
	5/3/2014	-0.08	**5.1**	13.0	0.0	0
	5/4/2014	0.0	4.9	13.2	0.0	0
	5/5/2014	0.10	4.7	13.2	0.0	0
	5/6/2014	0.0	**5.0**	13.5	0.0	0
	5/7/2014	0.0	3.7	12.6	0.0	0
	5/8/2014	0.0	4.9	12.4	0.0	0
	5/9/2014	0.05	4.9	13.7	0.0	0
	5/12/2014	0.00	**6.5**	14.8	0.0	0
	5/13/2014	0.05	**5.0**	15.3	0.0	0
	5/14/2014	0.00	4.7	15.2	0.0	0
	5/15/2014	0.10	4.1	14.2	0.1	nm
	5/16/2014	0.00	4.9	14.0	0.1	nm
	5/19/2014	0.00	**5.2**	15.8	0.0	0
	5/27/2014	0.00	**5.4**	14.4	0.0	0

TABLE 1

SOIL GAS MONITORING DATA FROM OCTOBER 2013 TO JUNE 2014
HIMCO SITE
ELKHART, INDIANA

		Pressure	Gas Quality/Combustible Gas Concentrations			
Location	Date	(in H_2O)	Methane % [1]	CO2 % [1]	O2 % [1]	H2S % [1]
SGP-117D	11/27/2013	-0.1	2.6	18.0	0.7	0
	12/17/2013	0.0	2.4	17.0	0.9	0
	12/23/2013	-0.05	2.5	14.8	0.7	0
	1/29/2014	0.01	1.5	9.1	6.3	1
	2/25/2014	-0.01	0.1	0.1	22.5	0
	3/27/2014	0.30	0.1	0.0	20.8	0
	4/24/2014	-0.18	0.2	0.2	21.1	0
	4/30/2014	-16.1	0.0	0.9	20.7	nm
	5/1/2014	-0.09	0.1	0.1	20.9	0
	5/2/2014	-0.34	0.0	0.7	20.6	0
	5/3/2014	0.0	0.1	0.9	20.4	0
	5/4/2014	0.0	nm	nm	nm	nm
	5/5/2014	0.0	nm	nm	nm	nm
	5/6/2014	-4.25	nm	nm	nm	nm
	5/7/2014	0.00	nm	nm	nm	nm
	5/8/2014	0.00	nm	nm	nm	nm
	5/9/2014	0.00	nm	nm	nm	nm
	5/12/2014	0.05	nm	nm	nm	nm
	5/13/2014	0.00	nm	nm	nm	nm
	5/14/2014	0.00	nm	nm	nm	nm
	5/15/2014	0.09	nm	nm	nm	nm
	5/16/2014	0.00	nm	nm	nm	nm
	5/19/2014	0.00	nm	nm	nm	nm
SGP-16	11/27/2013	0.0	0.0	0.9	20.2	0
	12/17/2013	0.0	0.0	0.8	20.3	0
	12/23/2013	0.0	0.0	0.8	21.5	0
	1/29/2014	0.0	0.0	0.7	19.3	0
	2/25/2014	0.0	0.0	1.1	20.1	0
	3/27/2014	0.0	0.0	0.0	20.9	0
	4/24/2014	0.0	0.0	0.6	20.6	0
SGP-27S	11/27/2013	0.0	0.0	0.2	20.7	0
	12/17/2013	0.0	0.0	0.1	20.4	0
	12/23/2013	0.0	0.0	0.1	21.6	0
	1/29/2014	0.0	0.0	0.7	19.7	0
	2/25/2014	0.0	0.0	0.9	20.8	0
	3/27/2014	0.0	0.0	0.3	20.9	0
	4/24/2014	0.0	0.0	0.6	20.6	0
	4/30/2014	0.0	0.0	0.9	20.1	nm
	5/1/2014	0.0	0.0	0.9	21.0	0
	5/2/2014	-0.01	0.0	0.7	20.6	0
	5/3/2014	0.0	0.1	0.7	20.5	0
	5/4/2014	0.0	0.0	0.6	20.1	0
	5/5/2014	0.0	0.0	0.6	19.9	0
	5/6/2014	0.0	0.0	0.7	20.5	0
	5/7/2014	0.0	0.0	0.6	20.1	0
	5/8/2014	0.0	0.0	0.5	19.8	0
	5/9/2014	0.0	0.0	0.5	20.0	0
	5/12/2014	0.0	0.0	0.0	20.5	0
	5/13/2014	0.0	0.0	0.8	20.0	0
	5/14/2014	0.0	0.0	0.8	20.0	0
	5/15/2014	0.30	0.0	0.9	20.4	nm
	5/16/2014	0.00	0.0	0.9	20.0	nm
	5/19/2014	0.00	0.0	0.9	19.8	0

TABLE 1

SOIL GAS MONITORING DATA FROM OCTOBER 2013 TO JUNE 2014
HIMCO SITE
ELKHART, INDIANA

		Pressure	*Gas Quality/Combustible Gas Concentrations*			
Location	*Date*	*(in H_2O)*	*Methane %* [1]	*CO2 %* [1]	*O2 %* [1]	*H2S %* [1]
SGP-27D	11/27/2013	0.0	0.0	1.0	20.1	0
	12/17/2013	0.0	0.0	0.8	20.0	0
	12/23/2013	0.1	0.0	0.7	21.1	0
	1/29/2014	0.0	0.0	0.7	20.3	0
	2/25/2014	0.01	0.0	0.9	20.9	0
	3/27/2014	0.0	0.0	0.4	20.8	0
	4/24/2014	0.0	0.0	0.5	20.7	0
	4/30/2014	0.0	0.0	0.9	20.3	nm
	5/1/2014	0.0	0.0	0.9	21.0	0
	5/2/2014	-0.01	0.0	0.7	20.8	0
	5/3/2014	0.0	0.1	0.8	20.5	0
	5/4/2014	0.0	0.0	0.7	20.0	0
	5/5/2014	0.0	0.0	0.7	19.8	0
	5/6/2014	0.0	0.0	0.7	20.5	0
	5/7/2014	0.0	0.0	0.7	19.9	0
	5/8/2014	0.0	0.0	0.4	19.9	0
	5/9/2014	0.0	0.0	0.6	19.9	0
	5/12/2014	0.0	0.0	0.6	20.7	0
	5/13/2014	0.0	0.0	0.7	20.2	0
	5/14/2014	0.0	0.0	0.7	20.2	0
	5/15/2014	0.32	0.0	0.8	20.4	nm
	5/16/2014	0.00	0.0	0.8	20.3	nm
	5/19/2014	0.00	0.0	0.9	19.8	0

Notes:

[1] Percent by volume

nm - not monitored

6.5

Methane reading exceeding 5.0 percent by volume

Attachment A

Stratigraphic Logs

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: HIMCO SITE
PROJECT NUMBER: 39611
CLIENT: BAYER HEALTHCARE LLC
LOCATION: ELKHART, IN

HOLE DESIGNATION: SGP-117D
DATE COMPLETED: December 18, 2012
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: M. GROVES

NORTHING: 2352127.99
EASTING: 234644.33

TOP OF CASING 767.80
TOP OF RISER 766.91
GROUND SURFACE 763.95

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft
0	CL-SILTY CLAY, with sand, trace gravel, firm, low plasticity, brown, moist	
	- soft, very moist at 3.2ft BGS	
	- stiff, moist at 3.7ft BGS	
	- firm at 5.0ft BGS	
8	GLASS DEBRIS, broken bits	755.65
	SP-SAND, trace silt, fine grained, compact, poorly graded, brown, moist	755.55
	- brown at 11.0ft BGS	
	- very moist to wet at 12.0ft BGS	
	- medium grained, gray at 13.3ft BGS	
15	END OF BOREHOLE @ 15.0ft BGS	748.95

MONITORING WELL: CONCRETE; BENTONITE CHIPS; 3/8" NYLON WELL CASING; 2" BOREHOLE; 3/8" STAINLESS STEEL MESH WELL SCREEN 10/20 SAND; NATURAL COLLAPSE

WELL DETAILS
Screened interval:
753.95 to 752.95ft
10.00 to 11.00ft BGS
Length: 1ft
Diameter: 0.4in
Material: 3/8" STAINLESS STEEL MESH SCREEN
Sand Pack:
754.45 to 751.95ft
9.50 to 12.00ft BGS
Material: 10/20 SAND

SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
1GP		80		0.0
				0.0
2GP		100		0.0
				0.0
				0.0
3GP		60		0.0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 039611WIN.GPJ CRA_CORP.GDT 6/4/14

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: HIMCO SITE
PROJECT NUMBER: 39611
CLIENT: BAYER HEALTHCARE LLC
LOCATION: ELKHART, IN

HOLE DESIGNATION: SGP-117S
DATE COMPLETED: December 18, 2012
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: M. GROVES

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	MONITORING WELL	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
	NORTHING: 2352127.66 EASTING: 234647.09 TOP OF CASING TOP OF RISER GROUND SURFACE	767.83 766.84 763.94					
0	CL-SILTY CLAY, with sand, trace gravel, firm, low plasticity, brown, moist		CONCRETE				
2			BENTONITE CHIPS				
			3/8" NYLON WELL CASING				
	- soft, very moist at 3.2ft BGS						
4	- stiff, moist at 3.7ft BGS		2" BOREHOLE				
	- firm at 5.0ft BGS						
6							
			3/8" STAINLESS STEEL MESH WELL SCREEN 10/20 SAND				
8	END OF BOREHOLE @ 8.0ft BGS	755.64					
10			WELL DETAILS Screened interval: 756.94 to 755.94ft 7.00 to 8.00ft BGS Length: 1ft Diameter: 0.4in Material: 3/8" STAINLESS STEEL MESH SCREEN Sand Pack: 757.44 to 755.94ft 6.50 to 8.00ft BGS Material: 10/20 SAND				
12							
14							
16							
18							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 039611WIN.GPJ CRA_CORP.GDT 6/4/14

Attachment B

Stratigraphy Logs - Bar Hole Grid

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: HIMCO SITE
PROJECT NUMBER: 39611
CLIENT: BAYER HEALTHCARE LLC
LOCATION: ELKHART, IN

HOLE DESIGNATION: BAR HOLE BB6
DATE COMPLETED: July 18, 2014
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
0	TOPSOIL	0.20					
2	CL-SILTY AND SANDY CLAY, trace fine and coarse gravel, firm, mottled, brown, moist		BACKFILLED WITH BENTONITE CHIPS	1DP		80	
4	- increase in sand and moisture content at 3.7ft BGS		2-1/4" BOREHOLE				
6							
8				2DP		90	
	SP-SAND, few rootlets, trace silt, compact, fine grained, dark brown, moist	8.70					
10	END OF BOREHOLE @ 10.0ft BGS	10.00					
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 039611-WI.GPJ CRA_CORP.GDT 7/30/14

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: HIMCO SITE
PROJECT NUMBER: 39611
CLIENT: BAYER HEALTHCARE LLC
LOCATION: ELKHART, IN

HOLE DESIGNATION: BAR HOLE AA3
DATE COMPLETED: July 17, 2014
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
0	TOPSOIL	0.20					
	CL-SILTY AND SANDY CLAY, trace fine and coarse gravel, firm, mottled, brown, moist		BACKFILLED WITH BENTONITE CHIPS; 2-1/4" BOREHOLE	1DP		90	
8				2DP		90	
	SP-SAND, trace silt, trace rootlets, compact, fine grained, dark brown, moist	8.50					
10	- wet at 9.9ft BGS	10.00					
	END OF BOREHOLE @ 10.0ft BGS						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 039611-WI.GPJ CRA_CORP.GDT 7/30/14

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: HIMCO SITE
PROJECT NUMBER: 39611
CLIENT: BAYER HEALTHCARE LLC
LOCATION: ELKHART, IN

HOLE DESIGNATION: BAR HOLE AA4
DATE COMPLETED: July 17, 2014
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
0	TOPSOIL	0.30	BACKFILLED WITH BENTONITE CHIPS; 2-1/4" BOREHOLE	1DP		90	
	CL-SILTY AND SANDY CLAY, trace fine and coarse gravel, firm, mottled, brown, moist						
8				2DP		90	
	SP-SAND, trace silt, trace rootlets, compact, fine grained, dark brown, moist	8.60					
10	- wet at 9.9ft BGS	10.00					
	END OF BOREHOLE @ 10.0ft BGS						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 039611-WI.GPJ CRA_CORP.GDT 7/30/14

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: HIMCO SITE
PROJECT NUMBER: 39611
CLIENT: BAYER HEALTHCARE LLC
LOCATION: ELKHART, IN

HOLE DESIGNATION: BAR HOLE AA5
DATE COMPLETED: July 17, 2014
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
0	TOPSOIL	0.30	BACKFILLED WITH BENTONITE CHIPS; 2-1/4" BOREHOLE	1DP			
2	CL-SILTY AND SANDY CLAY, trace fine and coarse gravel, firm, mottled, brown, moist						
4							
6							
8	SP-SAND, trace silt, compact, fine grained, dark brown, moist	7.80		2DP			
10	END OF BOREHOLE @ 10.0ft BGS	10.00					
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 039611-WI.GPJ CRA_CORP.GDT 7/30/14

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: HIMCO SITE
PROJECT NUMBER: 39611
CLIENT: BAYER HEALTHCARE LLC
LOCATION: ELKHART, IN

HOLE DESIGNATION: BAR HOLE AA6
DATE COMPLETED: July 17, 2014
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
0	TOPSOIL	0.30	BACKFILLED WITH BENTONITE CHIPS; 2-1/4" BOREHOLE				
	CL-SILTY AND SANDY CLAY, trace fine and coarse gravel, firm, mottled, brown, moist			1DP		80	
8	SP-SAND, trace silt, trace rootlets, compact, fine grained, dark brown, very moist, moderate "sewer-like" odor	8.00		2DP		90	
10	END OF BOREHOLE @ 10.0ft BGS	10.00					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 039611-WI.GPJ CRA_CORP.GDT 7/30/14

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: HIMCO SITE
PROJECT NUMBER: 39611
CLIENT: BAYER HEALTHCARE LLC
LOCATION: ELKHART, IN

HOLE DESIGNATION: BAR HOLE A3
DATE COMPLETED: July 16, 2014
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
0	TOPSOIL	0.20	BACKFILLED WITH BENTONITE CHIPS; 2-1/4" BOREHOLE	1DP		90	
2	CL-SILTY AND SANDY CLAY, trace fine gravel, firm, mottled, brown, moist						
4							
6							
8	SP-SAND, trace silt, compact, fine grained, dark brown, moist	7.70		2DP		90	
10	- wet at 9.8ft BGS END OF BOREHOLE @ 10.0ft BGS	10.00					
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 039611-WI.GPJ CRA_CORP.GDT 7/30/14

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: HIMCO SITE
PROJECT NUMBER: 39611
CLIENT: BAYER HEALTHCARE LLC
LOCATION: ELKHART, IN

HOLE DESIGNATION: BAR HOLE A5
DATE COMPLETED: July 17, 2014
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
0	TOPSOIL	0.20	BACKFILLED WITH BENTONITE CHIPS; 2-1/4" BOREHOLE				
	CL-SILTY AND SANDY CLAY, trace fine and coarse gravel, firm, mottled, brown, moist			1DP		90	
8	SP-SAND, trace silt, trace rootlets, compact, fine grained, dark brown, moist	8.10		2DP		80	
	- wet at 9.8ft BGS						
10	END OF BOREHOLE @ 10.0ft BGS	10.00					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 039611-WI.GPJ CRA_CORP.GDT 7/30/14

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: HIMCO SITE
PROJECT NUMBER: 39611
CLIENT: BAYER HEALTHCARE LLC
LOCATION: ELKHART, IN

HOLE DESIGNATION: BAR HOLE A6
DATE COMPLETED: July 17, 2014
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
0	TOPSOIL	0.20	BACKFILLED WITH BENTONITE CHIPS; 2-1/4" BOREHOLE	1DP		90	
2	CL-SILTY AND SANDY CLAY, trace fine and coarse gravel, firm, mottled, brown, moist						
4							
6							
8	SP-SAND, trace silt, trace rootlets, compact, fine grained, dark brown, moist	7.50		2DP		90	
10	END OF BOREHOLE @ 10.0ft BGS	10.00					
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 039611-WI.GPJ CRA_CORP.GDT 7/30/14

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: HIMCO SITE
PROJECT NUMBER: 39611
CLIENT: BAYER HEALTHCARE LLC
LOCATION: ELKHART, IN

HOLE DESIGNATION: BAR HOLE A7
DATE COMPLETED: July 18, 2014
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
0	TOPSOIL	0.20	BACKFILLED WITH BENTONITE CHIPS; 2-1/4" BOREHOLE	1DP		90	
2	CL-SILTY AND SANDY CLAY, trace fine and coarse gravel, firm, mottled, brown, moist						
4							
6							
8				2DP		90	
	SP-SAND, trace silt, trace rootlets, compact, fine grained, dark brown, moist	8.80					
10	END OF BOREHOLE @ 10.0ft BGS	10.00					
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 039611-WI.GPJ CRA_CORP.GDT 7/30/14

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: HIMCO SITE
PROJECT NUMBER: 39611
CLIENT: BAYER HEALTHCARE LLC
LOCATION: ELKHART, IN

HOLE DESIGNATION: BAR HOLE B3
DATE COMPLETED: July 17, 2014
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
0	TOPSOIL	0.20	BACKFILLED WITH BENTONITE CHIPS; 2-1/4" BOREHOLE	1DP		80	
2	CL-SILTY AND SANDY CLAY, trace fine and coarse gravel, firm, mottled, brown, moist						
4							
6							
8				2DP		80	
8	SP-SAND, trace silt, compact, fine grained, dark brown, moist	8.70					
10	- wet at 9.9ft BGS	10.00					
10	END OF BOREHOLE @ 10.0ft BGS						
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 039611-WI.GPJ CRA_CORP.GDT 7/30/14

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: HIMCO SITE
PROJECT NUMBER: 39611
CLIENT: BAYER HEALTHCARE LLC
LOCATION: ELKHART, IN

HOLE DESIGNATION: BAR HOLE B4
DATE COMPLETED: July 16, 2014
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
0	TOPSOIL	0.20	BACKFILLED WITH BENTONITE CHIPS; 2-1/4" BOREHOLE	1DP		90	
2	CL-SILTY SAND, trace fine gravel, firm, mottled, brown, moist						
4							
6							
8	SP-SAND, trace silt, compact, fine grained, dark brown, moist	7.80		2DP		80	
10	- wet at 9.9ft BGS END OF BOREHOLE @ 10.0ft BGS	10.00					
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 039611-WI.GPJ CRA_CORP.GDT 7/30/14

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: HIMCO SITE
PROJECT NUMBER: 39611
CLIENT: BAYER HEALTHCARE LLC
LOCATION: ELKHART, IN

HOLE DESIGNATION: BAR HOLE B5
DATE COMPLETED: July 17, 2014
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
0	TOPSOIL	0.20	BACKFILLED WITH BENTONITE CHIPS; 2-1/4" BOREHOLE	1DP		80	
2	CL-SILTY AND SANDY CLAY, trace fine and coarse gravel, firm, mottled, brown, moist						
4							
6							
8				2DP		90	
	SP-SAND, trace silt, trace rootlets, compact, fine grained, dark brown, moist	8.30					
10	- wet at 9.9ft BGS	10.00					
	END OF BOREHOLE @ 10.0ft BGS						
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 039611-WI.GPJ CRA_CORP.GDT 7/30/14

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: HIMCO SITE
PROJECT NUMBER: 39611
CLIENT: BAYER HEALTHCARE LLC
LOCATION: ELKHART, IN

HOLE DESIGNATION: BAR HOLE B6
DATE COMPLETED: July 18, 2014
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
0	TOPSOIL	0.20	BACKFILLED WITH BENTONITE CHIPS; 2-1/4" BOREHOLE				
	CL-SILTY AND SANDY CLAY, trace fine and coarse gravel, firm, mottled, brown, moist			1DP		80	
4	- increase in sand content, moist to wet at 4.7ft BGS						
8				2DP		90	
	SP-SAND, trace silt, trace rootlets, compact, fine grained, dark brown, moist	8.80					
10	END OF BOREHOLE @ 10.0ft BGS	10.00					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 039611-WI.GPJ CRA_CORP.GDT 7/30/14

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: HIMCO SITE
PROJECT NUMBER: 39611
CLIENT: BAYER HEALTHCARE LLC
LOCATION: ELKHART, IN

HOLE DESIGNATION: BAR HOLE B7
DATE COMPLETED: July 18, 2014
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
0	TOPSOIL	0.20					
2	CL-SILTY AND SANDY CLAY, trace fine and coarse gravel, firm, mottled, brown, moist			1DP		90	
4			BACKFILLED WITH BENTONITE CHIPS				
6	- increase in sand and moisture content at 5.0ft BGS		2-1/4" BOREHOLE				
8				2DP		90	
	SP-SAND, trace silt, trace rootlets, compact, fine grained, dark brown, moist	8.70					
10	END OF BOREHOLE @ 10.0ft BGS	10.00					
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 039611-WI.GPJ CRA_CORP.GDT 7/30/14

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: HIMCO SITE
PROJECT NUMBER: 39611
CLIENT: BAYER HEALTHCARE LLC
LOCATION: ELKHART, IN

HOLE DESIGNATION: BAR HOLE C3
DATE COMPLETED: July 17, 2014
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
0	TOPSOIL	0.30	BACKFILLED WITH BENTONITE CHIPS; 2-1/4" BOREHOLE	1DP		90	
2	CL-SILTY AND SANDY CLAY, trace fine and coarse gravel, firm, mottled, brown, moist						
4							
6							
8				2DP		90	
	SP-SAND, trace silt, compact, fine grained, dark brown, moist	8.20					
10	END OF BOREHOLE @ 10.0ft BGS	10.00					
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 039611-WI.GPJ CRA_CORP.GDT 7/30/14

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: HIMCO SITE
PROJECT NUMBER: 39611
CLIENT: BAYER HEALTHCARE LLC
LOCATION: ELKHART, IN

HOLE DESIGNATION: BAR HOLE C4
DATE COMPLETED: July 17, 2014
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
0	TOPSOIL	0.20					
	CL-SILTY AND SANDY CLAY, trace fine and coarse gravel, firm, mottled, brown, moist		BACKFILLED WITH BENTONITE CHIPS; 2-1/4" BOREHOLE	1DP		90	
8	SP-SAND, trace silt, compact, fine grained, brown, moist	8.20		2DP		80	
10	- wet at 9.9ft BGS	10.00					
	END OF BOREHOLE @ 10.0ft BGS						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 039611-WI.GPJ CRA_CORP.GDT 7/30/14

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: HIMCO SITE
PROJECT NUMBER: 39611
CLIENT: BAYER HEALTHCARE LLC
LOCATION: ELKHART, IN

HOLE DESIGNATION: BAR HOLE C5
DATE COMPLETED: July 17, 2014
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
0	TOPSOIL	0.30	BACKFILLED WITH BENTONITE CHIPS; 2-1/4" BOREHOLE	1DP		90	
2	CL-SILTY AND SANDY CLAY, trace fine and coarse gravel, firm, mottled, brown, moist						
4							
6							
8				2DP		90	
	SP-SAND, trace silt, compact, fine grained, dark brown, moist	8.20					
10	END OF BOREHOLE @ 10.0ft BGS	10.00					
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 039611-WI.GPJ CRA_CORP.GDT 7/30/14

Attachment C

Stratigraphy Logs - SGP-110R & SGP-114R

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: HIMCO SITE
PROJECT NUMBER: 39611
CLIENT: BAYER HEALTHCARE LLC
LOCATION: ELKHART, IN

HOLE DESIGNATION: SGP-110R
DATE COMPLETED: July 16, 2014
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITORING WELL	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
0	TOPSOIL	0.20	CONCRETE				
	CL-SILTY AND SANDY CLAY, trace fine and coarse gravel, firm, mottled, oxidation staining, brown, moist		BENTONITE CHIPS				
2	- concrete and slag debris at 2.6ft BGS		1/2" PVC WELL CASING	1DP		90	
4	- fine sand from 4.0 to 4.4ft BGS		3-1/4" BOREHOLE				
6			1/2" PVC WELL SCREEN 3/8" CLEAR STONE				
	SP-SAND, trace fine gravel, trace slag, compact, brown-black, moist	7.00		2DP		80	
8							
	PT-PEAT, reddish brown, rootlets, soft, moist	8.80					
10	END OF BOREHOLE @ 10.0ft BGS	10.00					
12							
14							
16							
18							

WELL DETAILS
Screened interval:
3.00 to 6.00ft BGS
Length: 3ft
Diameter: 0.5in
Material: 0.5" INNER Ø PERFORATED PVC SCREEN
Seal:
1.00 to 2.00ft BGS
Material: BENTONITE CHIPS
Sand Pack:
3.00 to 6.00ft BGS
Material: 3/8" CLEAR STONE

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 039611-WI.GPJ CRA_CORP.GDT 7/30/14

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: HIMCO SITE
PROJECT NUMBER: 39611
CLIENT: BAYER HEALTHCARE LLC
LOCATION: ELKHART, IN

HOLE DESIGNATION: SGP-114R
DATE COMPLETED: July 16, 2014
DRILLING METHOD: DIRECT PUSH
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITORING WELL	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
0	SP-SAND, with fine to coarse gravel, trace silt, compact, fine grained, brown, moist		CONCRETE; BENTONITE CHIPS				
2	SP-SAND, trace silt, compact, fine grained, brown	2.10	1/2" PVC WELL CASING	1DP		80	
4			3-1/4" BOREHOLE				
6			1/2" PVC WELL SCREEN 3/8" CLEAR STONE				
8	- trace medium sand, grayish brown at 8.0ft BGS - moist to wet at 9.2ft BGS		WELL DETAILS Screened interval: 3.00 to 7.00ft BGS Length: 4ft Diameter: 0.5in Material: 0.5" INNER Ø PERFORATED PVC SCREEN Seal: 1.00 to 2.30ft BGS Material: BENTONITE CHIPS Sand Pack: 2.30 to 7.10ft BGS Material: 3/8" CLEAR STONE	2DP		90	
10	END OF BOREHOLE @ 10.0ft BGS	10.00					
12							
14							
16							
18							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 039611-WI.GPJ CRA_CORP.GDT 7/30/14

Attachment D

Laboratory Results - Organic Matter Content

HAENGEL & ASSOCIATES
ENGINEERING
Geotechnical, Environmental, Structural, Construction, & Inspections.

42040 KOPPERNICK ROAD, SUITE 407
CANTON, MICHIGAN 48187
PHONE: 734.455-9771
FAX : 734.455-9774
EMAIL haei@earthlink.net
WEBSITE www.haengelassociates.com

LOSS ON IGNITION TEST DATA

PROJECT: Himco
LOCATION: Elhart, IN
CLIENT: Cornestoga- Rovers & Associates
SAMPLED BY: Bart Williams
DATE SAMPLED: 7/22/2014

PROJECT NO: CRA - No. 039611
SOURCE: Himco
DATE TESTED: 7/22/2014

Sample No.	1	2	3	
Sample Location	SO- 39611-071814-Blo-001			
Sample & Tare Weight Before Ignition (g)	173.9			
Sample & Tare Weight After Ignition (g)	152.1			
Loss of Weight By Ignition (g)	21.8			
Weight of Tare (g)	149.4			
Initial Weight of Sample (g)	24.5			
Percent Organic (%)	**89.0**			